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## ORIGINAL ARTICLES.

### CLINICAL LESSONS.

*Motor Ataxia—Ataxia in a Child of Three Years, with Retained Muscle reflexes—Hysterical Ataxia, with Retained Muscle-reflexes.*

By S. WEIR MITCHELL, M.D., LL.D.,  
OF PHILADELPHIA.

THE child, whose parents kindly permit me to show him to you, has a form of malady which I saw for the first time when I saw him last week. Here is a fine little man, well developed, exceedingly strong, and as intelligent as most children at his age. He is quite unable to stand alone. Even to sit alone seems difficult. No one will fail to note that he is ataxic from head to feet. The following notes of his condition at the present time are compiled from the examination-record made by Dr. John K. Mitchell and the very clearly written statement of the father.

P. Q., male, three years and five months of age.

*Family history.* The child's grandfather was addicted to alcohol. The parents are second-cousins and much alike in disposition and general characteristics. There is also some tuberculous history in the ancestry.

*Previous history.* The child was born normally at term. No instruments were used. The only thing attracting attention at the time of birth was "something unusual" about the little one's ankles. The physician said it was "all right," and the babe seemed otherwise like others; the child cried, kicked, nursed from the breast, etc. Owing to mammary abscesses the mother nursed the infant no more than four weeks. After that the child lived on non-sterilized cows' milk, and later on "malted milk" and other artificial foods until eight months of age, and with sustained good health.

At that time, however (eight months of age), it was taken on a railroad journey. It is supposed that "sour milk" was the cause of a severe attack of diarrhea, which resulted, at the end of the long trip or a few days later, in what the physician writes was "spurious hydrocephalus." Then the temperature was 103.5° F. The child threw its hands about, especially toward the head, and moaned a great deal. It had also "intolerance of light" at this time.

The physician gave a cool bath and a dose of brandy. By the next day the patient had recovered from the serious symptoms, including the diarrhea.

"Recovery was rapid and uneventful."

After this attack of bowel-trouble digestion

seemed as well performed as usual. Two months later (*i. e.*, at ten months of age) it was specially noticed that the child could not sit erect. Nothing had seemed abnormal until now, other than undue lassitude. On examination, Dr. J. S. Hackney found that "there was an antero-posterior curvature of the spine," the most prominent point being at about the mid-dorsal region.

Accordingly a plaster jacket was applied. This was cut and removed as often as necessary. There seemed to be some relief from this for the now evidently weak back. The jacket was worn for six weeks.

The little patient has kept up a general good tone since then, the back seeming to have become straight and quite strong again; nor has he had any bowel-complaint since that in his first summer.

*The present condition* seems to date from thirteen months of age, when the child began to have an oscillatory movement of the left eye and later of the right eye. This nystagmus was always the more noticeable in the left eye. At this time, too his health was good. He seemed somewhat nervous, but did not have any convulsive movements, and never has had any such tendency.

At fourteen months of age he had an attack of bronchitis. In the second week of this illness symptoms of what was said to have been tuberculous meningitis made their appearance. Both bronchial and meningeal symptoms, however, disappeared during the third week. Since then, until now, the child has enjoyed very good health, excepting for extreme nervousness, seemingly lit up anew during the illness stated. He now became easily startled and scared. This timidity has become the more apparent as he grows older. He is at present unusually sensitive. His father says the mental faculties are normal, or at times precocious.

The child did not move about if placed on the floor until two years old. It has only been since January, 1894 (three years and two months old), that he has at all begun to "pull" himself to a standing position with his arms with the aid of a chair, bed, etc. Now, when up, he can walk along the side of the bed or balusters, holding firmly for support. This ability has been acquired only within the past few months. Even when thus holding himself upon his feet he seems in fear of falling. He will, therefore, not attempt to use his feet unless holding firmly to some object.

The patient has been extremely constipated until about a year ago. Since then the bowels have been reasonably regular. This change has probably been brought about by the greater physical exertion of attempted movement.

The child is rather pale; the muscles are fair in size, but very flabby. The head is large, but sym-

metrical. The chest is large, indeed unusually full for a child. He does not crawl, but he can shuffle about, seated; he can walk about when supported, but with a marked ataxic gait and with feebleness. He "kicks" the legs forward in the effort at locomotion. The erectores spinæ are weak. The abdominal muscles and thigh-muscles do not hold the body steadily erect on the legs. He leans too far forward or back. The tendency is more backward, however, when he is thus supported. He cannot feed himself.

Incoördination is marked in the hands, but there is no tremor. He uses the left hand better than the right, and possibly the left leg a little better than the right one.

*Nervous system.* Sensation is perfect everywhere. Knee-jerks and elbow-jerks are normal, and no ankle-clonus exists. Muscle-jerks of the arms and legs give normal response on stimulation with the percussion-hammer. Electrical examination shows no alteration to faradism or galvanism. The child seems intelligent and alert, though timid and nervous. No signs of pain were elicited at any time during the examinations. He talks fairly, drawls his words somewhat, but speaks freely. The mouth and teeth are normal. There is no preputial adhesion, no incontinence of urine, and this excretion is normal.

*Eyes* (examined by Dr. A. G. Thompson). The "pupils react normally to light and accommodation. There is no choked disc. The nystagmus of both eyes and the convergent squint of the left eye are, therefore, not due to any refractive error," but are incoördinate movements, such as are seen in other parts of the body.

All other functions and organs are normal.

It seems reasonably clear that the cause of this interesting malady was not prenatal. The child remained well until he had the too common experience of summer diarrhea, followed as we see so often by brain-symptoms. What happened then is not now clearly known. He is said to have had "spurious hydrocephalus," and was, according to the note, very ill. At or after this time he could not sit up as he had been able to do. At the thirteenth month nystagmus began, or was first seen. Then followed a bronchitis and other brain-symptoms described as "tuberculous meningitis," and from this too he got well, and was seen to be more and more awkward as he grew older.

I confess to some puzzle in this case. There are no eye-ground signs. There is no wasting. There is no palsy of any nerve. There is unusual power from crown to sole; there is no sensory loss, and yet he cannot stand at all without some stay. Aided by a finger he can walk, throwing his feet out, and "clumping" precisely like a true spinal ataxic. But no such case in an adult had ever such a degree of disorder without disturbed feeling, or pain, or anesthesia, or girdle-pain, or pupillary signs. Here are none of these. Also, the ataxia

is in all the limbs, but is worse in the legs. In the arms and legs, to my surprise, I found normal tendon-jerks, so called, and also normal reinforcements of these muscle-reflexes. There is nothing spastic in these. Sometimes they are excessive, probably from reinforcement due to emotion. There is no clonus; but this is rare in the child under any conditions. If this were a spinal ataxy, with added lateral sclerosis, we should have spastic reflex signals and the usual feebleness apt to be seen in that disorder; also the high ataxic movement of the feet seen in our case would be wanting.

Tabes of all kinds is as a rule progressive. The lad before you continuously improves in the use of his limbs. This is, therefore, neither tabes, nor spastic ataxia, nor is it the picture of hereditary ataxia; neither has he pain-crises, or trophic changes, so that probably the posterior nerve-roots and the gray spinal centers are to be excluded from a share in this disorder.

It seems to me possible that the double brain-diseases he is said to have had, and which left his power of mind and of muscle unimpaired, may have fallen on the cerebellum and left it permanently injured in one of its functions. As against this is the lad's gain in steadiness; but even with most of the cerebellum gone birds have after a year been able to fly. The mechanisms of replacement of function are not as yet clear to us, although we are often called on to recognize their value.

It is then possible that the cerebellum may have suffered over a large area of the surface, and that this damage may have been in part repaired, and a share of the functional activities safe-guarded and replaced by the other mechanisms which contribute to the integrity of equilibration.

I cannot say, however, that I am, even now, entirely sure as to a cerebellar lesion being the true cause of the ataxic state seen in this child, but it cannot be spinal unless the ataxia of childhood should prove to be a very different condition from that of the adult—an ataxia without sensory, ocular, or reflex symptoms. If we had any evidence of tumor of the cerebellum we should be aided in our diagnosis. In it there may be a knee-jerk, but we have not a sign of tumor.

I confess, as I study this case, to increasing difficulty of decision; as one looks at it, the case is to the eye a typical spinal ataxia; examined more nearly, much is lacking to make the perfect picture of that disorder or disease. But almost as much is also wanting to assure us of a cerebellar origin, and one should remember, I repeat, that we have hardly any studies of spinal ataxia in childhood. I reported one, years ago, which came out of Pott's disease, at the age of five, and was seen by me in a woman of forty. It had progressed in leaps, with long

periods of pathological inactivity. Of the earlier symptoms I learned little.

When as thoughtful a man as Gowers admits that the pain, ataxy, or anesthesia may be due to disease either of the cord or of the peripheral nerves, one sees the tangle into which we have gotten our knowledge of the mechanism of harmonious muscle-action, and its offspring, equilibration.

As there may be much loss of motor power, much impairment of motor centers and nerves, without corresponding loss of muscle-harmonies, we must, I think, still look to disease of the nerves of muscular sensation, their spinal tracts, and their cerebellar connection, for the varied seats of the incoordination of complex muscle-acts.

It is conceded that integrity of the knee-jerk, or any tendon-jerk from a blow on the tendon, implies wholeness of the neural arc of conduction and response from the centers concerned. When there is distinct, typical ataxia without spastic states, and with normal presentation of knee-jerk and ankle-jerk, it seems reasonable to conclude that the cause of this ataxy must lie above the region concerned in the muscle-muscle-reactions.<sup>1</sup>

The law which applies to knee-jerks and all tendon-jerks explains in part the direct muscle-jerk from a blow. For here, as Morris Lewis and I have shown, this response is due to two contributions, one the intrinsic muscular irritability, and one the addition from the cord. The former continues after nerve-section; the latter is lost, but its loss is only to be proved by the fact that *you can then no longer reinforce the direct muscle-jerk by remote voluntary motion*.

Such is the case late in posterior sclerosis. A blow on the muscle causes a jerk, but reinforcement is no longer possible. The response from tendon-jerk is only a finer, a more delicate, expression, and a larger one, of the same phenomenon. It is increased by tension, and obeys the law of the so-called tendon-jerk. In this boy neither muscle-jerk nor tendon-jerk is gone, nor yet their reinforcement.

The facts as to all this matter of sensory and motor reinforcement, discovered by Lewis and myself, remain as yet almost unnoticed in the textbooks, and unused by clinical inquirers.

As regards this boy, I conclude, then, that the cause of his remarkable ataxic state must lie above the seat of response to the tendon-jerks, and does not interfere with the track of reinforcement, which is easily obtainable.

I must leave this case and its consideration without further words. I do not fully understand it, and the frank statement that I do not may have for you some moral value. Under training, with constant

little bribes to do this or that until he succeeds, the lad is steadily improving. Even ordinary ataxics may improve by industrious efforts made with closed eyes, and this child has in his favor a normal mind and entirely wholesome nutrition.

An equally interesting case for study is a woman, now in McCormick ward. Dr. Walker will read the notes, which owe much of their interest to Dr. Musser, in whose charge she has been at the Presbyterian Hospital; and to Dr. Pearce, who is responsible for the blood-counts made for Dr. John K. Mitchell's paper on the influence of massage on the blood-count.

I shall presently show you the case. It is another illustration of clinical difficulty in decision. Here again we have an example of ataxia, typical and also extreme, with, save for one notable exception, perfect knee-jerks and elbow-jerks and entire muscle-jerks from a blow, and all reinforcing:

E. I., female, single, fifty years of age, was admitted into the Infirmary for Nervous Diseases, in the service of Dr. S. Weir Mitchell, March 2, 1894. She is intelligent, and gives the following history as to her illness, amplified by the observations at the Presbyterian Hospital and by our notes.

*Family history.* The woman is of a long-lived ancestry. Her father and mother are living and well at eighty-two and seventy-five years respectively. Three sisters are all healthy. Two brothers have died of scarlet fever and dysentery, and one sister in infancy. There are no neuroses or psychoses among her relatives, and the patient herself had an uneventful childhood as regards maladies, passing through the usual diseases in mild forms.

In 1887 she suffered from the ordinary symptoms of nervous exhaustion; then she became run down, had anorexia, and felt tired most of the day. These symptoms ran the course of many of the cases illy cared for. Then, after an attack of influenza in 1889, she was almost bedridden for a year from what she says was "weakness" only.

After this she was about again for several months, able to walk with a cane, but could not bear much exertion. She was especially weak in the spine and had considerable pain across the lumbar region. The patient also states that at this time she always had better use of the right foot than of the left—the latter was heavy, and seemed to "drag" in walking.

She continued in this way with but little change in the foregoing meager symptomatology until July, 1890, when she went to the Cooper Hospital, Camden, remaining there three months, with little or no improvement. From thence she was taken to the Presbyterian Hospital, Philadelphia, where she stayed in the wards one year. There she was in a highly neurotic condition, and had hysterical outbursts of crying and laughing. The sequelæ of these climaxes (which occurred, as a rule, near the menstrual epochs) were states of lethargy and again of fear, in which temporary hysterical delusions became prominent. The sick women about

<sup>1</sup> Contra-distinguished from skin-muscle-reflexes.



her were often much frightened by her peculiar wandering talk. In a few days she was apt to regain partial control, and would censure herself for acting so foolishly—of which, however, she had only vague remembrances. At this time, too, she seemed able to walk only with the assistance of a nurse, and only for short distances. Her upper extremities were also weak, and she was clumsy. It was, therefore, with difficulty that she fed or assisted in dressing herself. Under rest and tonics there was improvement of the general health, and on leaving the hospital she was able to walk a short distance with the aid of a cane. She was then at home from March to November, 1892, when she was readmitted to the Presbyterian Hospital, where she has been ever since with a multiplicity of symptoms.

Menstruation was normal up to June, 1893. In July, 1893, she had a severe attack of dysentery. The convalescence was slow, and she was left very anemic, the blood-count showing as low as 581,000 red cells on August 1st of that year. On September 1, 1893, the blood-count showed 950,000 red cells with macrocytes, microcytes, etc. On October 18, 1893, the red cells had increased to 1,620,000. The patient's condition seemed now fairly good. Her color had returned in a measure, so that the outlook seemed more encouraging. There was no menstrual flow between June and October, 1893, in which latter month she had a slight show, which recurred again in November, but never since.

By January 1, 1894, there was no material change, save that in the last few days she was decidedly more anemic again, and had headache, dyspnea, weakness, palpitation of the heart on the slightest attempt at exertion, with edema of the ankles coming on late in the afternoon. There was no edema of the face. The skin, too, has become of a lemon-yellow color, and the conjunctivæ of a bluish tint. Her lips are almost colorless.

The apex beat of the heart is in the fifth interspace. No thrill is felt. The shock of the second sound is readily felt in the pulmonary area. The area of cardiac dulness is normal. There is a soft hemic systolic murmur, low in pitch, transmitted into the axilla, accompanying but not obliterating the first sound at the apex. There is also a higher-pitched systolic murmur (probably hemic) heard in the pulmonary area.

Percussion posteriorly on the left side, a little above the spine of the scapula, reveals an almost tympanitic note. This is probably a transmitted note from the dilated stomach found more directly in front. The area of liver-dulness is slightly increased. There is one tender spot on palpation with the finger-tips to the right of the median line, two inches and another two and a half inches above the umbilical line. On January 16th, 1894, the patient had severe pain in the region of this tender spot, with great pallor and increasing weakness, so much so that duodenal ulceration and possibly hemorrhage was thought of. Dr. Musser had the stools carefully examined. No blood was passed, however, and no parasite could be found as a cause of the severe anemia; but this has latterly been proved to be not *pernicious* anemia. The hemoglobin had at this

time gone down to 15 per cent., while the red blood-cells only numbered 930,000. There were also poikilocytes, macrocytes, and microcytes in abundance, while macroscopically a drop of blood looked like slightly tinged muddy water.

By February 22, 1894, the patient's skin and mucous membranes had again brightened. Her general condition also became much improved. She was decidedly less nervous, and sat up a short time in a chair each afternoon, but tired easily and could not walk.

On admission to the Infirmary, March 2, 1894, the following notes were made as to her condition: She is a large woman, a brunet, fairly well nourished, weighing 129 pounds. She complains of a feeling of "numbness and tingling" in her hands and feet. She says if she undertakes to hold anything in her hands she must *see* it in order to feel sure that it is there. She can feed herself, but her hands are too clumsy to permit of cutting her food. She cannot dress her hair. She can button her night-dress, but clumsily, and only as far up as she can see the buttons. These defective acts seem to be all due to awkwardness rather than to actual loss of tactile sense, which seems perfect in the hands and fingers. The disorder is mainly a motor ataxia. There is no subjective numbness or tingling anywhere except in the hands and feet. She does not complain of headache. She has pain in the back after any exertion, such as sitting up. We got her up in standing position, when the following was observed: *Station*: She can stand *only* by being supported on either side; she takes a few steps while being thus held, but the movements are markedly ataxic. The left foot is *pushed* forward. The right one is thrown up and out in utter incoordination.

In the sitting position, unsupported, and with eyes closed she does not sway.

Other than the characteristic gait, ataxia of the lower extremities is shown by an inability to bring the heel of either foot in contact with the opposite instep. Ataxia of the upper extremities is shown *even when lying* by inability to bring the fingers of the outstretched hand to the nose with the eyes closed. *Per contra*, the movements of the lower extremities are less incoördinate when she lies supine.

*The reflexes*, plantar, epigastric, and abdominal, are normal. The knee-jerks are also normal and re-inforcible. There is clonus. In this case, too, there is absence of the normal ankle-jerks, as tested by tapping the tendo Achillis, but they can be elicited by reinforcement. The elbow-jerks are normal and re-inforcible. The muscle-jerks are everywhere normal and re-inforcible.

*Sensibility*. She distinguishes the two points of the esthesiometer when placed on different fingers, and points out quite accurately the fingers so touched. There seems to be some delay. Tactile sensation on the palmar and dorsal surfaces of both hands is likewise normal. *The thermal sense* is perfect. As to the weight- (or muscle-) sense, on holding the palm of the hand out (the patient being blind-folded), she distinguishes a difference between the following weights, *i. e.*, "the least observable differ-



ence" of Weber's law:<sup>1</sup> The right palm tells one ounce from two ounces only; the left palm tells one-quarter ounce from one-half ounce. Thus there is a difference in muscle-sense between the right and left arms, and the perception is not as acute as it should be. Numbness and tingling sensations are complained of in the hands and feet. No such paresthesia exists in other parts. There is no anesthesia or hyperesthesia, but there is varying analgesia to a deep pin-prick, as follows: The left lower extremity is analgesic from the groin to the metatarso-phalangeal joints; and the right upper extremity from midway between the shoulder and elbow to the metacarpophalangeal joints. The condition of analgesia of the upper extremity is variable, however, as twenty-four hours after the first examination sensation to pain seemed almost as acute as upon the opposite side. The right leg and thigh are at times partially analgesic to a pin-prick, but the areas of defect vary greatly from day to day.

Dr. Willits reports the muscular response to faradism everywhere normal.

Drs. de Schweinitz and Thomson made the following eye-report: "Both discs gray, especially in the deeper layers. Arteries too small, veins normal. Pupils normal. Color-fields (red and blue) typically reversed. Form-fields contracted."

The reaction-time of the different senses was next investigated. This reaction-time, however, will remain somewhat unsatisfactory until we record a sufficient number of tests upon the normal and abnormal individual to serve as a basis of comparison.<sup>2</sup>

Mr. Lightner Witmer kindly made examinations of this woman for me at the Psychological Laboratory of the University of Pennsylvania, on March 27, 1894, from which the following is abstracted:

First, as regards the motor nervous system, as recorded on the chronoscope, an instrument for recording the rapidity of a motion.

It was found that to pass over a distance of 50 c.m. it took the right hand  $\frac{224}{1000}$  of a second (*i. e.*, 224  $\sigma$ ). In the left hand  $\frac{241}{1000}$  of a second was required to pass as quickly as possible over the same distance.

<sup>1</sup> Weber used the method of "least observable differences" as applied to sensations of pressure and the measurement of lines by the eye, but Fechner expanded it and assumed that all just observable differences are equally great; so that the law is sometimes called "Fechner's law." Expressed in another way, the results depend on (1) strength of stimuli; (2) degree of excitability. If two is constant and one is then varied, it is found that if the stimulus be doubled, trebled, etc., the sensation only increases as the logarithm of the stimulus (*e. g.*, stimulus 10, 100, and 1000 times, then sensation increases 1, 2, and 3). There is a lower limit of excitation liminal intensity and an upper limit of excitation liminal intensity. Thus above this no appreciable increase in sensation can be distinguished. This is called the "range of sensibility." Thus, with 10 grams in the hand, we have to add or remove 3.3 grams before a difference in sensation is perceptible. In 100 grams we would have to add or withdraw 33.3 grams.

<sup>2</sup> Professors Fullerton and Cattell published, in 1892, a pamphlet in the Philosophical Series, University of Pennsylvania, on "The Perception of Small Differences, with Especial Reference to the Extent, Force, and Time of Movement." Ten normal persons were examined.

A second series of these motor-impulse experiments (made *after* all the reaction-time experiments), were but little lengthened over the first series, thus pointing to the absence of fatigue of any considerable amount.

The normal rate of movement from the experiments of Profs. Fullerton and Cattell varies from between 87  $\sigma$  to 180  $\sigma$  for 50 c.m., as recorded on the chronoscope. The woman's movements were therefore slow.

The reaction-time to sound varied from 181 to 343  $\sigma$ , somewhat longer than the normal, which varies from 120  $\sigma$  to 170  $\sigma$ .

The reaction-time for light varied from 160  $\sigma$  to 350  $\sigma$ . The normal light-perception is from 160  $\sigma$  to 200  $\sigma$ . The reaction-time to electric shock varied from 200  $\sigma$  to 476  $\sigma$ , a very marked retardation—and this too while the muscle-response to faradism seemed normal. Here is one of the enigmas appearing in this curious case.

There is thus a general tendency to slowness of perception. The receptive centers have at least become dulled. Is it the incipency of organic disease? is the question that presents itself.

The patient's general health is fair. All organs seem normal, excepting that the bowels are a little torpid. She has good control over the bladder, and analysis of the urine is negative. Sleep is undisturbed.

The color has returned markedly since January, 1894, the red blood-cells numbering 3,200,000, and not being altered in shape or size. The hemoglobin-estimation is 60 per cent.<sup>1</sup>

The case as you hear it must strike you as peculiar. Reading this story backward, so to speak, the paresis, the anorexia, the type of mental disorder, all point to hysteria. Then we have added a dysentery, which leaves her with such anemic conditions and accompaniments as, for a time, seemed to make the diagnosis of pernicious anemia probable. The history of the development of the remarkable ataxia is not complete, but its presence is to-day her most obvious symptom. Note also the facts of varying analgesia, the typical changes in the color-fields, the equally curious alterations in these, and you have before you a case of hysteria with some very unusual additions.

As you see her walk, with the aid of two nurses, she usually lifts the feet high, and throws them, so to speak, in a disorderly way. With shut eyes, her motions are all worse, as you may perceive when the ataxic hand-movements are thus studied. You would have no doubt, at sight, of hers being a case of typical posterior sclerosis, and now you would have still less doubt if you recall the fact that she cannot tell the difference as between the weight of a penny and that of a silver dollar. The exact facts are better

<sup>1</sup> After the administration of ferri pyrophosphas in divided doses up to 95 grains in some 70 hours, the blood-count showed increase of red blood-corpuscles to 4,160,000, and of hemoglobin to 70 per cent.

related in the case-notes. Apparently she has more or less loss of the sense of amount of muscular exertion put forth, loss of muscle-sense.

Naturally, I look with suspicion on a hysterical woman long in hospital-wards, but as to the facts I have stated, I do not think we can have been deceived. I shall presently return to this matter of loss of muscle-sense.

Considering the case as ataxic, such as we see here at every clinic, you would be surprised to find, as I now show you, that we have normal knee-jerks, elbow-jerks, and muscle-jerks, and also normal reinforcements. The responses are not spastic, and the limbs are not like those of people with lateral columnar disease and "lead-pipe" passive flexion. There is no clonus; I can get no ankle-jerk by a blow on the tendo Achillis or on the sole of the foot. I can call out this response by motor or sensory reinforcement. But for this remarkable exception I should have almost no indecision as to how to characterize this deeply interesting case. Perhaps I should not give too much importance to the partial loss of ankle-jerk, especially in a case so profoundly hysterical. Is this case, then, an hysterical ataxia due to hysterical loss of muscle-sense? That this should be, along with preservation of muscle-reflexes, and with no tactile sense, and only variable cutaneous analgesia, is interesting and unusual, and, let me admit, a little puzzling. We may not too readily conclude. Hysteria confuses, but does not exclude organic spinal maladies, and the partial loss of the lowest muscle-reflex is suspicious. But there are no other signals of posterior sclerosis, no pain, no reflex losses in the ataxic arms, no eye-signs. On the whole, I conclude that we have here an unusual type of hysterical disorder of movement.

Briquet, whose pictures of hysteria look to me a little too vivid, described a form of ataxia due to loss of both skin-sense and muscle-sense. He seems to think that the loss of the latter is not to be met with until the former has become positive. With this double loss comes incapacity to effect a motor purpose without seeing the acting member. With view, he says, the muscular acts are perfect. This is not the case in our patient, nor do I think it ever is in these cases precisely as he states it. The sight helps the true hysterical ataxic, but does not enable her to attain ease and perfection in her acts. In the present case there is probably a partial loss of muscle-sense which is hysterical, and very exaggerated motor consequences.

The interest of it lies in the isolated loss, without equal absence of cutaneous tactile sense. I have often seen more or less surface-anesthesia with more or less or no loss of muscle-sense. The great defect of this latter seen in our present case, without any notable tactile loss, is more than merely uncommon.

Again, with the ataxia and failure to estimate differences in weights, we have complete muscle-reflexes—all of which make one suspect that the cause of ataxia may lie above the planes of these reflex areas.

In the same ward is a girl of twenty-two, who has the more common form of hysterical ataxia which I described many years ago. She is now nearly well, but a month ago her walk was a thing most interesting to see. She walked as a jointed doll endowed with life might walk, a succession of jerky abruptly-ended movements, with sway of head and body back and front, or to right and left. For a fuller account I refer you to my original delineation of this singular form of disorder.

Our patient was put alone in a room, given very decided faradic currents to the muscles with the wire brush on a dry skin and daily full massage.

She has been rapidly improving. At first, to aid her steps, she used the device I described long ago as crutch-canes, but she can now walk unaided; she has deserted her bed; knits and sews, and altogether seems a gratifying and prosperous case.

*April 23, 1894.* Her station is good with closed eyes. Sensation is now normal in all forms, and the obvious delay in perception exists no longer. She can now walk some twenty feet unaided. I do not feel at all secure that she will ever be entirely well.

#### **MOOTED POINTS AS TO FRACTURES OF THE ARM, WITH NOTICE OF AN IMPROVED SPLINT.<sup>1</sup>**

BY J. MCFADDEN GASTON, M.D.,  
OF ATLANTA, GA.

It is my purpose in this paper to ask the attention of the Fellows of the Association to some practical considerations touching the treatment of fractures near the articulations of the arm. There have been divergent views of surgeons as to the management of the osseous lesions in close proximity to the wrist-joint, the elbow-joint, and the shoulder-joint, so that so far as may be practicable, it devolves upon us to arrive at uniformity of practice.

To a considerable portion of the profession it may appear that "old things are passed away, behold all things are become new." But there are still some among us who prove all, and hold fast to that which is good. It is to those who are disposed to judge surgical appliances by their merits, and not by their novelty, that I appeal for a correct decision of these mooted points. I am impressed with the benefits likely to accrue from an interchange of the observations of different surgeons upon this class of fractures, and I trust that those having had expe-

<sup>1</sup> Read before the American Surgical Association at its meeting at Washington, D. C., June 1, 1894.

rience in the management of them may join in the discussion.

It may be promised that, in cases of fracture complicated with dislocation, there is not any good reason for carrying out the injunction of some authorities to set the fracture and splint the bones before proceeding to reduce the dislocation. It is not often that such an adjustment of the fragments of the bone can serve or be made available for leverage or rotation in correcting the dislocation; and whatever may be the appliance, it must necessarily be deranged by the efforts to effect the replacement of the luxated bone. Of course, the readjustment of the dressing will devolve upon the surgeon, after undertaking the reduction of a dislocation under such circumstances, and hence it has to me appeared best to resort to any and every means for reduction before setting the fracture.

The management of dislocations in joints contiguous to fractures must claim careful consideration in treating such cases, and it is encouraging to note the success that has attended the devices for correcting luxations in advance of adjusting the dressing for the fracture.

As this is not entirely germane to the object of this paper, I will not enter into details, but simply insist that in every case of fracture near an articulation complicated by luxation, the correction of the latter should be a preliminary step to treating the fracture. Whether at the wrist-joint, the elbow-joint, or the shoulder-joint, this plan holds good for the observance of the surgeon, and he who fails to adopt it must encounter increased difficulties in securing a satisfactory result. Not only should the luxation be corrected at the outset, but efficient measures should be resorted to for obviating recurrence of the dislocation before proceeding to adjust the broken bone.

Instead of proceeding, as is usual in the description of fractures, from above to the lower part of the arm, I shall consider this plan as more honored in the breach than in the observance, and commence with the wrist, as was done by Gross in his work on *Surgery*.

The only fracture of this portion of the arm in regard to which there is any noteworthy feature of divergence in practice is that of the lower extremity of the radius, known as Colles' fracture. This occurs generally at a distance of from a half to an inch, more or less, from the carpal articular surface, and may be transverse or with an obliquity inward or outward on the part of the lower fragment. It is accompanied with a characteristic deformity of the wrist, corresponding to the shape of a silver fork, and may be complicated by a displacement of the styloid extremity of the ulna. The adjustment may be effected in most cases by extension upon the hand and pressure over the projecting lower frag-

ment, but there is usually much difficulty in maintaining the apposition of the fragments.

It is remarkable that devices so different in their practical operation should have been adopted by surgeons for the correction of this deformity; and the names of authorities in various eras have been associated with splints for Colles' fracture, of great variety in form and application. One considers it best to have a single dorsal splint reaching to the carpal bones; another holds that a palmar splint, having a prominence within the hand, is all that is needed; still another claims that dorsal and palmar splints, extending only to the hand, with appropriate compresses next the respective surfaces, are requisite. But a time-honored appliance, which bears the name of Nélaton, with one or two splints having a pistol-handle curve at the hand, extending from the elbow to the ends of the fingers, has been adopted by some throughout all the changes, and with a satisfactory result. I need not dwell upon the multiform devices introduced at different times by surgeons for this class of cases, as you are all presumed to be familiar with them. But while the conditions to be fulfilled are the same, we must use a wise discretion in selecting that mode of treatment which accomplishes the best results. I realize fully all the difficulties to be met, and recognize the claims made for many of these so-called improvements in dressings for Colles' fracture, yet the ground of the objections to the splints with a pistol-handle curve in these cases is not valid. It is held, for instance, that they do not admit of mobility of the fingers and the carpal bones, and hence that there is increased liability to stiffness of these parts subsequently. If there is any just foundation for the rule in surgery which I have been accustomed to inculcate, that in fractures the immobility of an articulation on the distal side shall be secured in dressing such injuries, then the apparatus for Colles' fracture should control completely any movement of the wrist-joint and the fingers. This is effectually accomplished by the splint originally adopted by Nélaton, and used to a greater or less extent since by surgeons of this country and of other countries throughout the world. If these parts are kept at rest from the very outset of the treatment, without undue constriction, there is decidedly less tendency to inflammation of the structures involved than under the plan of frequent movements of the wrist and fingers, which have been insisted upon by those opposed to the pistol-handle splint. I am convinced that the inconvenience and danger of confining the hand in a state of extreme extension toward the ulnar side have been very much exaggerated, and that its advantages will be realized by all who use the proper precautions in carrying it out.



The dorsal and palmar Nélaton splints, with appropriate padding and compresses, serve to keep the fragments of bone on the outer and inner aspects of the arm in their proper position, and with the extension effected by curvature of the hand from the radial border by the pistol-handle shape all the requirements are met for the prevention of deformity. Those who have adopted other measures without first having tried this should put it to the test of experiment.

I am not urging the claims of the pistol-handle splint upon theoretic grounds, but from practical observation of its advantages in the treatment of Colles' fracture. It seems to have been employed by some with bad results, but I am impressed with the fact that the application of palmar and dorsal splints, which do not press unduly upon any portion of the hand or arm, is not attended with any unfavorable effects. The placing of a splint either anteriorly or posteriorly, which extends only to the wrist and is secured in position by adhesive strips or bandages encircling the arm, is more liable to produce engorgement of the structures of the hand than the uniform support given by a roller-bandage, with splints extending from the ends of the fingers to the elbow. Again, the injunction of the advocates of leaving the fingers exposed, that movements of these and the carpal bones should accompany the treatment, is more likely to increase the local inflammation than a process to maintain complete rest.

Early movement of the fingers and the carpal joint must increase the tendency to subsequent stiffness from the aggravation of the inflammation in the sheaths of the tendons leading to their adhesion. Thus the effect, which we should seek to avert by rest is induced by early passive and active movements. It is undoubtedly true that inaction of a part for a considerable period is followed by inability for a time to accomplish voluntary movements of the structures involved. But if there have been no inflammatory developments, there will be no adhesion of the tissues, and passive motion will soon restore mobility to the parts. After considerable experience with the double pistol-handle splints in the treatment of Colles' fracture I have not observed a single case in which there has remained any permanent impairment of the use of the fingers or of the wrist-joint, nor has any material deformity at the point of fracture followed this treatment. A recent cure confirmed all that is claimed for it.

The next division of fractures to which consideration is asked pertains to the bones above and below the elbow-joint, not leaving out fracture of the olecranon, though this is being treated generally by the same methods as were adopted long ago.

With the exception of the head and neck of the

radius, in which fractures rarely occur, there is a great liability to osseous lesions in the vicinity of the elbow-joint, and no class of cases appeals with more urgency to the surgeon for a clear diagnosis and for the adoption of precise measures for treatment.

Dislocation of the head of the radius or the upper part of the ulna is frequently observed in connection with fractures of the lower extremity of the humerus, making grave complications and requiring correction before proceeding to dress the fracture.

The feasibility of adopting any general principle in regard to the relative position of the arm and forearm which shall meet all cases is of paramount importance. A wide diversity in this respect has long existed among surgeons of prominence, and more recently the claimants for the flexed and for the extended position of the arm have contended strenuously for their respective plans of treatment. There may be such a difference in the conditions involved as to warrant the preference for the one or the other mode in special cases, and perhaps some surgeons may secure a satisfactory result in fractures near the elbow with the extended position of the arm, while others may find the flexed position most advantageous. It behooves us, however, to investigate very thoroughly all the bearings of these different modes of dressing the arm, when there is likely to be such inflammatory involvement of the articulation as to induce ankylosis of the elbow-joint. All must know how useless to its owner is a stiff arm in a straight posture, and also how convenient it is to have a stiff arm flexed so as to approach a right angle. While it is held that, with proper precautions in the management of these fractures, ankylosis should not occur, yet there are cases with such complications in which this result will ensue in spite of the best directed treatment. If the surgeon is called upon to treat an injury about the elbow in which he cannot reasonably expect to arrest ankylosis of the joint, there remains no question as to the propriety and even the necessity of employing the apparatus of angular form in dressing the fracture.

But a decision in regard to adopting the straight or angular splint should be made upon a basis of adaptability to the special conditions presented in the case, and while it may be discussed from a theoretic standpoint, the only final solution must depend upon the comparative results of the two processes. The practicability of maintaining the fragments of bone in proper apposition, when the fracture involves the articulation or is in close proximity to it, is promoted rather by the flexed than by the extended position of the arm after proper reduction has been effected.

Should there be a fracture immediately above the condyles, the lower fragment is in my observation prone to project forward, and bringing the forearm

up to a right angle, or even to an acute angle, assists in keeping the fragments in apposition. If the projection of the lower portion of bone be directed backward, and it can be forced into line with the shaft of the humerus by direct pressure accompanying extension, then the flexed position may be adopted with advantage in applying the dressing to maintain apposition. The rather fanciful claim in favor of the extended posture being favorable to preserving the outward angularity of the forearm upon the arm is not entitled to any special consideration, as there is nothing in the flexed position to interfere with this relation of the radius and ulna to the humerus in the restoration of the bony structures.

The comfort and convenience of dressing the arm in a flexed position for fractures near the elbow commends this position strongly in preference to the extended position, and it is to my mind totally inexplicable why a straight splint should be used, except for fractures of the olecranon.

Of course, the utmost care is requisite to detect the exact osseous lesion of either bone, and whether the injury involves the lower portion of the shaft of the humerus, its condyles, epicondyles, and the epitrochlea on the upper border of the articulation, or the upper part of the ulna, with the coronoid process and the neck of the radius on the lower border, there is an urgent demand upon the surgeon for the greatest diligence in restoring the parts to their proper position. The establishment of their normal relations to each other should be the aim of our manipulations, and when this is not practicable we must count upon more or less deformity as a consequence. Without disregarding the apprehensions of authorities as to the dangers of constricting the limb unduly by a bandage, I find a roller applied from the fingers along the forearm and extending above the seat of injury to be advantageous, having the arm flexed at the elbow to a right angle. This angularity calls for support of like form, and taking the sound arm as a model, the outline is marked out upon large thick pieces of pasteboard, so as to extend from the wrist to the shoulder, corresponding to the outer and inner aspects of the limb. The board is cut so as to meet on the anterior and posterior median lines, is then soaked in water and molded accurately over a thin layer of cotton-batting around the entire member. If the edges are notched at a single point in front of the joint and at two points behind the joint the adaptation to the curve of the elbow will be more satisfactory. Should the sheets of pasteboard be light, several layers may be put together and held in place by a roller bandage before applying them. They are secured by a bandage passed from below upward, while an assistant turns in the margins to be molded with only suffi-

cient force to afford proper support to the structures about the elbow. After completing this application a dry, strong, angular pasteboard splint, or one of pine board should be bound to the inner side of the arm until the moistened pasteboard mold shall dry and become firm.

This mode of dressing has all the advantages of the plaster-of-Paris in its accurate adaptation to the parts and its efficient support, while it can be removed and reapplied daily if requisite.

The results obtained by this mode of dressing fractures near the elbow in young subjects have proved entirely satisfactory, not being followed in any case by ankylosis or permanent impairment of the movements at the joint. A comparatively small number of adults have been treated by this method, yet these have progressed favorably in every respect, and recovered full and free action of the arm.

Three months ago I had occasion to treat a laboring man, who sustained a fracture of the internal condyle, with a backward dislocation of the ulna, which was followed by extensive general inflammation about the joint and forearm. After reduction of the dislocation and coaptation of the bone, pasteboard was fashioned from the sound arm into angular splints, and after being moistened was molded to the palmar and dorsal surfaces of the injured arm, and placed at a right angle, with the thumb protruding in a directly vertical position between the splints.

The splints extended from the shoulder to the tips of the fingers, over layers of cotton-batting adjusted to the irregularities of the limb, and secured throughout the entire length by a roller-bandage. The forearm was then suspended in a sling around the neck, with the injunction to keep the arm at rest. Upon removing the dressing at the end of a week there was considerable ecchymosis, with swelling about the elbow, and friction with a liniment of spirit of turpentine and olive-oil, each two ounces, and pulverized camphor two drams, was practised freely before reapplying the firmly molded outer and inner splints with the roller to support them. The dressing, with the friction, was renewed every three or four days, without attempting any movement at the elbow for a month. Afterward passive motion of the joint was cautiously practised at each dressing, and gradual improvement has been observed, but there is still impaired mobility of the elbow. There is, however, no ankylosis, and I feel assured that, with use of the arm, which the man is now making in his daily work, the normal movements will be completely restored at the elbow-joint. I doubt very much whether such a favorable result could have been effected by treating this case with the arm in the extended position.

It is claimed by the advocates of extension of the arm in the early treatment of fractures near the elbow-joint, that in cases liable to become anky-

losed the limb should be gradually brought into the angular position. But this necessitates the very movement of the articulation that will aggravate the inflammation, and increase the tendency to ankylosis. On the contrary, if the arm is originally put in an angular position, affording the greatest utility to the member, it can be kept at rest in that position until all inflammation has disappeared.

The last questionable point to which reference will be made is that touching fractures near the head of the humerus. These may be intracapsular, involving the head and the anatomic neck, or they may only implicate the tubercles outside of the capsule. The most frequent seat of fracture, however, is through the surgical neck, which extends from the line of epiphyseal union to the attachment of the latissimus dorsi and pectoralis major muscles. The lines of fracture in those portions of the upper end of the humerus may be in various directions, and being covered with the thick structure of the deltoid muscle, the differential diagnosis is attended with great difficulty.

But, fortunately, the verification of fracture in any direction of this part of the bone will suffice for the adoption of measures suited to the case, and it is for this class of fracture that I have devised and adopted a special splint. The object being to effect extension and counter-extension, so as to keep the fragments in their proper relations to each other and at rest, this splint is well adapted to fractures of the shaft of the bone.

There is a description of this splint in my report upon "Fractures of the Arm," published in the *Transactions of the Medical Association of Georgia* for the year 1887. The case was considered appropriate for a splint having the effect of extension and counter-extension, with complete immobility of the fragments of the bone. It is formed with a right angle in the plane of the boards at the elbow, the upper branch extending into the axilla with a crutch-like termination, and the lower branch reaching the wrist, so that when fitted to the inner face of the limb, and secured by a bandage, with a light board splint molded to the outer aspect of the arm over the fracture, all the conditions are met for retaining the fragments accurately in apposition. It is requisite that the arm shall be kept close to the body by a handkerchief or a piece of cloth, in a triangular shape, passing under the elbow and forearm, and around the neck, so as to be supported. Angular splints, extending from the wrist to the axillary space have been employed by others, but the crutch-shape above is the special feature of the splint.

The same principle of extension for fractures of the humerus was presented many years ago in an

apparatus of Lonsdale and in appliances of S. W. Hind, so that I do not lay any claim to priority, though unacquainted with their devices when my plan of treatment was originally adopted. The plan adopted by them was to attach a crutch-shaped piece of metal to the brachial limb of the splint, which was operated by a screw and cogs to adjust it to the length of the arm in different cases.

The wooden splint is measured by the sound arm, with the crutch projecting beyond the axillary folds, so as to have firm resistance when the lower branch is bound to the forearm of the affected limb. An opening is made at the angle, so as to avoid pressure upon the internal projection of bone at the elbow. The brachial face of the splint is padded with cotton-batting, and the concavity of the crutch is also well padded, while the cotton is secured by turns of a roller-bandage. When this splint is accurately fitted to the individual case it meets all the indications for fractures of the upper extremity of the humerus in a most efficient manner.

A fracture of the surgical neck of the humerus extending to the tubercles has recently been treated with this angular crutch-shaped internal splint, in the person of a white man of forty-five years of age, by my son, Dr. J. McF. Gaston, Jr. It was suspected at the outset to be complicated by a luxation of the head of the humerus, but an examination under the influence of an anesthetic eliminated this doubt in regard to the nature of the injury, and the diagnosis of fracture was confirmed by the evidence of crepitation. There was considerable inflammation about the shoulder, as three days had elapsed since the reception of the injury, and the slightest movement was attended with great pain, so that the anesthesia was essential for obtaining the information requisite for a correct view of the case. A medical attendant had at the outset entirely ignored the nature of the injury, and entered upon a course of treatment under the supposition that it was only a severe contusion of the part from a fall on the shoulder.

The angular splint with the axillary crutch, and the lower branch extending to the fingers, was excavated at the angle to accommodate the internal epitrochlea, and being properly padded, was ready for adaptation to the inner aspect of the left arm. A roller-bandage, applied from the fingers to the shoulder, to obviate the irregular contractions of the muscles and to prevent the extension of swelling to the forearm, should have preceded any other dressing, but was omitted in this case, in compliance with the practice of some high authorities on the treatment of fractures. With a layer of cotton-batting enveloping the entire arm, the crutch-extremity of the angular splint was pressed up firmly against the axillary fold, and the forearm held by an assistant in contact with the lower branch of the splint, while a roller-bandage was carried around the limb from the hand upward, securing also an outer splint molded to the humerus and the shoulder.



Thus support, with extension and counter-extension, was effected. The lower transverse branch of the splint, having the forearm firmly fixed to it by the bandage, kept up the extension, while the crutch-shaped portion pressing against the axillary fold maintained the counter-extension. It will be understood that the addition of the outer splint molded to the shoulder and supported by the bandage fulfilled all the conditions for securing the proper coaptation of the fragments of bone at the surgical neck of the humerus. The patient was provided with a sling, passing under the forearm and around the neck, so as to support the limb when in the erect posture, and expressed himself as being more comfortable than at any time since receiving the injury.

Upon redressing the arm, after the lapse of several days, it was found that there was a tendency to swelling of the hand and forearm, whereupon the roller-bandage was applied directly to the limb, and was kept up afterward with good effect.

After the lapse of six weeks the angular crutch-shaped splint was dispensed with, and the bony union was firm, but with exuberant callus there was considerable enlargement of the upper extremity of the humerus and inability to accomplish upward movements of the arm. Passive motion, backward and forward, could be made with facility, and by continued use of the liniment of camphorated oil and spirit of turpentine about the shoulder the upward movements have so improved that after nearly four months the man is able to use the left arm in the performance of most of his duties as a carpenter. The callus has been so far absorbed as not to leave any deformity, and the prospect is very favorable for complete restoration of the functions of the arm within a brief period.

It may not appear that the results in these special cases are conclusive, but, with an experience of many years favorable to these modes of dressing the respective injuries of the arm, I feel warranted in commending them to the confidence of the profession.

#### GYNECOLOGY AMONG THE INSANE, FROM THE GYNECOLOGIST'S POINT OF VIEW.<sup>1</sup>

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BUT a few decades have passed since the mentally alienated were looked upon as outcasts, possessed of devils, witchcraft, and altogether inhuman. The necessary protection of society from such monsters in human form led to their incarceration in prisons, where they passed their lives in misery, in many instances chained to floor or pillar, unkempt, half-naked, and wallowing in their own filth.

As the increasing number of this unfortunate class made other accommodations necessary, asylums were erected for their reception, but the prison-system still continued, until in the natural evolution, of knowledge, men began to understand that mental derangement was *not* crime but disease, and humanity demanded a more rational and kindly treatment for its kith and kin.

Until quite recently, however, the housing, clothing, and feeding of the insane was considered all that could be done or was necessary for these unfortunates. But increasing experience soon taught that this was not sufficient; that if the mentally sick were to recover, if they were ever again to assume their places in society as responsible men and women, other means besides the supplying of their animal wants must be brought to bear upon their condition.

And so to-day, in the leading institutions of this country and abroad we no longer find bare walls and desolate halls filled with the unemployed, but rooms made bright and cheerful with pictures, flowers, and birds; and hygiene, work, and amusements have become important factors in the treatment of insanity. In other words, mental derangement being now regarded as a *brain-sickness*, the asylum has assumed the functions of the hospital, and the prison-idea has been relegated to oblivion. But even the progress that has been made during the past few years is not at an end, for the good work so well inaugurated must still go forward, and the various *ailments* that afflict the body must be investigated and relieved. It is along this line, as surely as in the study of mental pathology and symptomatology, that advance in the future is to be made, and I here prophesy that the time is not far distant when no patient will be dismissed from the asylum as mentally cured until all morbid somatic conditions from which he may be suffering have also been relieved, or, if incurable, ameliorated as much as is possible.

I am here to-day to reiterate what I have so often said and written, that the insane, even the hopelessly demented, have as great a right to relief from all somatic ailments as those whose mental integrity has rendered asylum-hospital treatment unnecessary.

That insane women are as capable, in most instances, of suffering as acutely from local disorders as the sane has been demonstrated time and again, and that these affections often have a greater or less influence on their mental condition is now too well known to require comment. A careful perusal of the reports of our leading asylums will convince even the most skeptical that these are not theories but facts. The question so often brought forward is: Will the relief of these conditions restore the patient to mental soundness? I maintain that this

<sup>1</sup> Read before the Michigan State Medical Society, May 4, 1894.

view of the subject is both wrong and inhumane, and that the query should be: Will it do the patient good, relieve bodily suffering, and perhaps in this way ameliorate the mental symptoms manifested? Not every sane woman suffers from uterine or appendiceal disease, nor does every insane woman so suffer, although I am inclined to think that the proportion is slightly greater in the latter class than in the former, but in any community of several hundred souls there will be found some that are thus afflicted.

In the majority of asylum-cases the patients are quite capable of describing the nature of their sufferings, and to ask for help; but in a few the mental state may be such as to prevent this. In such instances, the watchfulness of the trained attendant detects by the manner, the expression of countenance, and general attitude of the patient that something is wrong and demands investigation. Such appeals from the helpless wards of the State should not be neglected, and I am happy to say that, in Michigan asylums at least, they are never disregarded.

In regard to the local treatment of the insane, I may say that in my experience it has given very satisfactory results, and I can see no difference between the sane and the insane in this respect. In a number of instances I have performed various minor operations upon asylum-patients, such as the restoration of the lacerated cervix and perineum, the removal of the carcinomatous breast, etc. Such operations do well as a rule in the insane, and, by the relief of the peripheral irritation, have a more or less decided influence upon the mental symptoms of the patient.

Perhaps, however, the greatest interest in this whole question centers around abdominal surgery in the insane. In a recent paper on this subject<sup>1</sup> a number of cases of celiotomy, embracing such conditions as fibroids of the uterus, ovarian cysts, ventral hernia, and chronic appendiceal disease, upon which I had operated were considered in detail, and to this paper those who are especially interested in the subject are referred.

There can be no doubt that surgical procedure for the relief of suffering, when gross pathologic changes have taken place in organs or parts, is generally quite justifiable. My results from the removal of new growths, etc., have been eminently satisfactory, and in all but one case recovery from the operation has been rapid and uneventful, and in nearly all instances have the patients improved mentally. Indeed, so frequently have the mental manifestations undergone a decided change for the better that I have now come to look for this almost as certainly as for recovery from the operation.

In discussing this question, however, we must guard against taking too optimistic a view of the subject, for, in all my experience, I have never yet seen a patient entirely relieved of her mental disorder as the result of operative treatment. In a few of my cases the marked mental improvement following the operation has given rise to the hope that an ultimate cure of the brain-sickness might result, but other conditions being present, over which neither medicine nor surgery can prevail, have led to disappointment.

To the castration of women for the cure of insanity I am utterly opposed, and I believe that the operative furor which is now so prevalent in this country has led to many unnecessary and unjustifiable mutilations of these helpless women, which otherwise would not have been tolerated. Such procedure, in my estimation, is not only to be deprecated but also denounced, and the abdominal surgeon who undertakes to cure mental alienation by this means brings discredit not only upon himself, but upon the specialty that he represents.

In the hystero-neuroses, when the symptoms point to the tubes or ovaries as the source of irritation, the removal of the healthy adnexa is at times quite warrantable, and the end often justifies the means. In insanity, however, the pathologic changes in the cord and brain upon which the condition depends should indicate to even the most superficial observer that ablation of the normal appendages can have no curative effect.

In summing up my conclusions, based on many years' experience in the practice of gynecology among the insane, I have no hesitancy in presenting the following:

1. That insane women have both a moral and a legal right to amelioration from suffering dependent upon local disorders, without reference to the effect that such relief may have upon their mental condition—that is, as regards cure.
2. That indiscriminate operating upon the insane, especially the removal of the normal appendages for the so-called cure of insanity, is not only to be deprecated on account of its utter uselessness, but also denounced because of the unnecessary mutilation of the patient.

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#### STUDENT VERSUS MEDICAL SCHOOL.

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IN an article by Dr. Allis in *THE MEDICAL NEWS* of June 16, p. 661, medical schools are charged with farcical entrance-examinations, with unusual and burdensome courses of study, with cramming and quizzing for hospital-appointments,

<sup>1</sup> *The Physician and Surgeon*, May, 1894.

with exacting examinations, and with plucking a large percentage of students under any circumstance.

Are these charges to be sustained?

It is a fact that all applicants are received in most medical schools and that the entrance-examinations are farcical, except in the State of New York, where they are puerile. There are individual exceptions to this rule, probably to the number of ten medical colleges, or, say, one-tenth of the total number of schools.

Is the course of study burdensome in its extent? Certainly our present courses, as laid out in the announcements of 1893-94, are still very far from equivalent to four years' work in any other department of the university. The method of teaching, which is a natural consequence of its motive, is bad, in every way bad, from a pedagogic standpoint. In this, of all professional schools, the true relation of physiology and psychology to the course of study and to the order and quantity of work should be exemplified. But nothing of the kind is the case. No medical school, so far as I know, makes any serious attempt to teach experimental psychology. In no one are the courses arranged with a pedagogic regard for sequence, and in no one does that first law of teaching, "The concrete before the abstract," receive the least recognition. If the student is overcome with much work and with too many studies and too many examinations, it is because the year is not properly divided into three or four terms of three or two months each, and the many subjects of the year equally divided into portions, one for each term; or, again, it is because the subjects are presented to the students in an unscientific and unschoolmasterly way, so that the students are not educated but crammed. In any case it is not because the medical schools attempt too much, but because they attempt to use the methods of our ancestors.

Let us admit that in law-schools a better method has been introduced, the case-system, and that in theology more careful and thorough methods have long been used. Let us admit that the schools of medicine attempt to teach in classes entirely too large for efficient instruction. Nevertheless, the fact remains that the course of study is not more extensive than the welfare of future patients demands. In regard to the number who are annually "plucked" at the final examinations not much can be said. If all were graduated, there would be another crime added to those already committed. The absurd custom of graduating all together at only one time in the year, with sound of trumpets and with display of flowers and wine, is in bad taste and is unscholarly and undignified. There ought to be at least four equidistant days in the year for awarding diplomas, and then only on the completion of all the work

of the course. It is a physiologic absurdity to make an ironclad course of study, an ironclad classification of students into four classes, and then graduate them on a single day after passing an ironclad examination. The educator would devise a system that would allow a strong student to do more work than a weak one. He would not have more than thirty men in any one class under any teacher at the same time. He would not allow a man to take more than four recitation-hours of work a day. He would humanely vary the exercises of any one student and guide him in the selections of his studies.

The educator would tear out the absurd amphitheaters in our medical colleges. He would increase the number of professors in every branch. He would separate the examining department entirely from the teaching department and have one man at its head. He would make the course of study flexible and constituted of an obligatory portion and an elective portion. He would limit the duration of any one course to three months, and he would require at least two examinations during each course. He would have libraries in each and every department, in each and every laboratory. He would see to it that each teacher knew the men he taught and examined.

In relation to the law that recognizes the medical schools and their diplomas, Dr. Allis' points are well taken. The State gives the education of physicians into the hands of physicians and virtually says: "Do this as you please; make what you can out of it. We will let no one practise whom you do not graduate. We will take care of, educate and support the blind that result from the careless and untrained men you send out and of the deaf-mutes that follow the epidemics you treat, all at a cost of \$2,855,694 (1890), but we will not give a cent to medical education or to the supervision of medical schools. We have \$750,000 a year to invest in the study of diseases of swine; our schools of theology have been liberally endowed by pious citizens (\$28,000,000), and our State universities have liberal provision for the study of the Semitic languages, the problems of mining, engineering, and architecture; but not a dollar for the study of the diseases of men." Hogs are of more account to these United States, in the opinion of legislators, than are healthy men. There is no lobby in our halls of legislation from the coming generations, and their parents are too busy with the affairs of to-day to protest against the unfair discrimination against the baby and in favor of the pig. And still the production of defectives goes on. For example: in 1850, in each million 422 were blind; in 1860, 403; in 1870, 527; in 1880, 976; in 1890, 805. The production of other defectives is in about the same proportion. The State, county, and city support hospitals and deny



their use to the medical schools and medical students who will soon be licensed physicians. It would pay the State, even if it were not its duty as the only capable corporation and the one most interested, to support, direct, and conduct all the medical education of the country. This will be done so soon as we, as a nation, value men above all other products of our clime, so soon as men believe that the Kingdom of Heaven may come here in this world as the *Pater Noster* indicates, so soon as selfish men cease to exploit for their own aggrandizement the sacred labor of medical education, so soon as our universities apply the same ethical and pedagogic principles to their medical departments as they use in directing their other graduate schools.

## CLINICAL MEMORANDA.

### THE DANGERS OF COCAIN.

BY ROBERT W. HAYNES, M.D.,  
OF LOS ANGELES, CAL.

THE medical literature of the past year abounds in recommendations of the use of cocaine in all sorts of disease, from nasal catarrh to melancholia, and with little reference to the likelihood of the formation of the habit.

One eminent authority and teacher goes so far as to say: "The moderate daily use of coca, according to our best information, is not injurious and increases the working powers;" again he says: "It will probably come into use to sustain men under severe exertion."

The same gentleman refers to cocaine hydrochlorate as being useful in one-grain doses as a stimulant to soldiers undergoing forced marches.

Dr. Hammond says: "We have heard a good deal of the cocaine-habit—a habit that I am very sure has no existence as such—there is no weakening of the will-power, and there is not as much trouble in ceasing its use as giving up tea or coffee."

As a slight protest against what appears to be a grave error in the estimation of the harmlessness of this terribly seductive drug, the following cases that came under my personal notice are related:

CASE I.—N. E. W., a physician and an opium-eater for years, though absolutely free from symptoms of poisoning, commenced with cocaine, gr. ss, hypodermatically to see what effect it would produce. Flushing of the face, dilatation of the pupil and general stimulation ensued. On the following night gr. j hypodermatically was necessary to produce the delightful *bienfaisance* that far exceeded that produced by opium, a feeling of not having a care in the world; of peculiar physical and mental beatitude. The dose was gradually increased until 5 and 10 grains in the twenty-four hours were taken. The irresistible desire for frequent repetitions of the dose was present, as the euphoric stage, though present until the end, grew shorter. The usual neurasthenic symptoms soon appeared, with delusions of persecution and hallucinations of sight and hearing, bright discs of light appearing on the walls throughout the sleepless nights. Loss of memory, muscular incoördination and aphasia followed.

Twice during the existence of the habit over-doses

were taken that caused alarming dyspnea, a hardly perceptible and thready radial pulse, extreme mydriasis, pinched skin and drenching perspiration, accompanied by loss of muscular power. These symptoms, in common with those produced by a debauch, were soon relieved by his ordinary dose of two grains of morphin.

This man abruptly abstained from the use of cocaine, at three different times, for the space of several months, and has not used the drug for the last nine months.

CASE II.—H. R. N., a druggist, commenced the use of a 4 per cent. solution of cocaine as a nasal spray to deplete the erectile tissue, and gradually increased the amount until seven grains were used at a single sitting. Loss of appetite, sleeplessness, headache, constipation, and loss of flesh followed. Muscular incoördination, hebétude, and enuresis then appeared; the last was almost immediately checked by the use of paregoric. Realizing the danger of the habit, the use of the drug was discontinued.

CASE III.—S. E., a physician, first used a 4 per cent. spray of cocaine to relieve chronic rhinitis, but continued its use for the stimulation it produced. Finding the effect on the mind very deleterious, as manifested by mental incoördination, he discontinued the practice, but is of the opinion that for many weeks afterward his mental powers were weakened.

CASE IV.—X., a child, two and one-half years old, received at the hands of an experienced surgeon, a urethral injection of gr. ss of cocaine, to facilitate the passage of a sound. In a few minutes clonic convulsions with wandering delirium set in, with the usual train of symptoms of acute poisoning, which terminated fatally in three days.

CASE V.—As this is written, news comes from Arizona of the death of a friend at the hands of a dentist, by the injection of four grains of cocaine into the gums prior to the extraction of teeth. The patient died in convulsions in an hour, from probably the medicament entering the circulation immediately, and expending its full force on the heart.

Senor Montagessa, after taking cocaine, said that God was unjust, in that he had made man to live without eating coca, and that he preferred a life of ten years of coca than one of a thousand without it.

It was my habit in the treatment of nasal troubles to order the use of cocaine as a nasal spray, but I have practically abandoned the practice, save in operations, as alarming symptoms, such as dyspnea, apnea, and loss of muscular power, were produced by very small quantities of a 4 per cent. solution.

The cases reported tend to show that the cocaine-habit, though abandoned much more readily than the morphin-habit, is acquired with much greater facility and insidiousness; that the remedy for cocaine-poisoning, as in cases IV and V, is probably full doses of morphin, as indicated by its happy effect in cases I and II.

Erlenmeyer is probably correct in saying that to try to cure the morphin-habit by cocaine is casting out Satan by Beelzebub.

623 SOUTH HILL STREET.

Dr. Percy F. Frankland has been appointed to the Chair of Chemistry and Metallurgy in Mason College, Birmingham, Eng.

## A CASE OF DOUBLE VAGINA.

BY CLINTON B. HERRICK, M.D.,  
OF TROY, N. Y.,

SURGEON TO THE TROY HOSPITAL, THE COUNTY HOSPITAL, AND THE  
HOUSE OF THE GOOD SHEPHERD.

A CASE of double vagina recently presented itself to me, and seems sufficiently interesting to record. It is of interest only as an anomaly, as the patient presented herself to obtain relief from hemorrhoids, which were well marked and occasioned considerable distress. Externally, the genitalia were normal. Upon separating the labia, the condition shown in the accompanying photograph was disclosed. The unnatural septum was

FIG. 1.



continuous between the two rather short vaginæ, into each of which there projected a diminutive cervix, but only in the right could an os, continuous with the cavity of the uterus, be found. In the left vagina there was a

FIG. 2.



dimple having the appearance of an os, but into which the probe could not be made to enter. The uterus was diminutive; the other organs were normal. The woman was thirty-five years of age, had menstruated quite regularly, and, though married, had never been pregnant. The diagram delineates the relation of the parts internally.

## MEDICAL PROGRESS.

*The Treatment of Gangrenous Hernia.*—CHAPUT (*Archives générales de Médecine*, May, 1894, p. 523) considers the treatment of gangrenous hernia one of the most complex problems in surgical therapeutics. The prognosis is always grave; whatever the treatment employed there will at all times be an inevitable mortality as a result of generalized infection. Intestinal suture is to be preferred to an artificial anus for a number of reasons. Suture does not expose the patient to the dangers and discomforts of the local condition, and not to the risk of inanition; it affords relief at a single sitting, while the other operation leaves a disgusting infirmity, ultimately necessitating multiple and grave operations. The mortality of the operation for the establishment of an artificial anus is about 28 per cent., and there is no ground to hope that this will be reduced by any technique. The mortality of intestinal suture is from 15 to 20 per cent., and there is ground for believing that these figures will be reduced. The total mortality following the establishment of an artificial anus reaches 80 or 90 per cent., while that from suture is not more than 30 or 40 per cent. The principal improvements in the operation of suture consist in free incision of the constricting tissues from within outward, a sufficient resection of the intestine, including all diseased or suspicious tissues, the employment of an interrupted circular suture, the non-reduction of the loop of intestine, and drainage of the peritoneum. Suture is contra-indicated in case of collapse, of grave peritonitis, or when for other reasons the conditions of operation are not favorable. If the lesions are not extensive it is best to invaginate them and introduce a double row of sutures. If the lesions are extensive, but do not involve the entire circumference of the bowel, one may, if the adjacent tissues are healthy, make a lozenge-shaped excision and unite the free margins as in applying an interrupted circular suture.

*Progressive Dementia and Incoordination of Movement in all Extremities in Brother and Sister.*—BOUCHARD (*Rev. Neurol.*, 1894, No. 1, p. 2; *Gaz. hebdom. de Méd. et de Chir.*, 1894, No. 28, p. 201) has reported the case of a male child, eight years old, that for three years had presented mental weakness, tremor, and difficulty in walking. The gait was like that of one with cerebellar ataxy; the movements of the upper extremities were also incoördinate. The reflexes were preserved and sensibility was intact. Speech was scanning and the mental processes were apathetic. In the course of a year the feet assumed a position of equino-varus and the child was incapacitated from walking. A year later the mental weakness was pronounced, the extremities had become rigid and could not be moved, and bedsores had formed. Finally epileptiform attacks set in and death ensued. At the post-mortem examination the pia mater was found adherent, but no abnormality of the brain was detected. The spinal cord presented a non-systemic sclerosis of the lateral columns and degeneration of the cells of the anterior horns. A sister of this patient at the age of ten years had for three years shown similar arrest of mental development, ataxic gait, and motor incoördination in the upper extremities, walking ultimately becoming impossible. An attack of influenza terminated fatally and

after death sclerosis of the lateral columns of the spinal cord was found. The father and mother of the patients were well, and three other children of a total of eight were living and well. The paternal grandfather had died in the sequence of an apoplectic seizure; the maternal grandfather had been an inebriate. It is believed that the cases belong to an undescribed form of family affection.

**The Relationship between Myxedema and Exophthalmic Goiter.**—At a meeting of the Société de Liège, held a short time ago, CANTER (*Annales de la Soc. Méd.-Chir. de Liège*, January, 1894, No. 1, p. 12; *Rev. Int. de Bibliog. méd., phar. et vétérin.*, 1894, No. 8, 133) presented a case of myxedema in a woman, forty-two years old, successfully treated by the administration of thyroid gland of the sheep in doses of a quarter or half a gland or more daily. The treatment was attended with nausea, vomiting, and weakness, when large doses were employed, but more remarkable was the fact that the frequency of action of the heart increased from 76 to 126, while palpitation became apparent; there was also sleeplessness, tremulousness, and profuse perspiration. The opinion is expressed that the symptoms of exophthalmic goiter are due to an intoxication of gastro-intestinal origin, as a result of which the secretion of the thyroid gland is increased, with the development of the characteristic symptoms of the disease, just as they occur after the therapeutic administration of the gland. It has further been observed that the administration of thyroid gland in cases of exophthalmic goiter is attended with an aggravation of the symptoms. In the course of time the thyroid gland undergoes degeneration or atrophy, as is the case with all glands that are subjected to morbid hyperactivity.

## THERAPEUTIC NOTES.

**Anilin Colors in the Treatment of Carcinoma.**—MOSETIG-MOERHOF (*Wiener medicin. Presse*, 1894, No. 20, p. 761) has reported the case of a woman, fifty-two years old, who presented below the right costal arch a tumor almost as large as a fist. For a period of nine years there had been recurrent attacks of colic of several days' duration and associated with a moderate degree of icterus. The woman was greatly emaciated, of pale-yellow complexion and flabby musculature, and the conjunctivæ were of sub-icteric hue. Upon palpation, the tumefaction was found to present a smooth, convex surface and a firm, elastic consistence, and to be only movable laterally with the abdominal parietes. The dulness on percussion merged with that of the liver. Laterally and inferiorly the tumor could be followed into the abdominal cavity; its fundus was not displaced by the respiratory movements. A diagnosis of tumor of the gall-bladder was made and an operation undertaken. Upon opening the gall-bladder some pultaceous matter was evacuated and the introduced finger came in contact with a soft, friable, yellowish new-growth, arising from the wall of the bladder and occupying the entire cavity of the viscus. By means of the finger and a spoon this growth was broken up and removed, and a small calculus was also dislodged. Histologic examination showed the neoplasm to be a villous carcinoma. The cavity was packed with gauze. On the sixth day

the tampon was removed and bile made its way out of the wound. The discharge continued for three weeks, until the opening became much reduced in size and finally closed. Every two, three, or four days a small rod of methyl-violet was introduced into the cavity and nine grains of methylene-blue were administered by the mouth daily. With this treatment the woman improved decidedly, gaining in weight and strength, sleeping better, having an improved appetite, and being free from pain.

**Potassium Permanganate as an Antidote to Cyanid-poisoning.**—Prompted by the thought that in the treatment of acute and rapidly occurring intoxications the best results are to be expected from chemic rather than physiologic antidotes, KOSSA (*Centralblatt für die medicin. Wissenschaften*, 1894, No. 17, p. 289) undertook an investigation into the antidotal power of potassium permanganate in case of cyanid-poisoning. He believed that by the administration of the permanganate the ingested cyanid would be converted into a relatively innocuous cyanate. Experiments with dogs showed that animals to which were administered toxic doses of potassium cyanid could be saved by the immediate administration of potassium permanganate; in one instance even a dose ten times the lethal one failed under these conditions to induce toxic effects. An animal that received a dose twenty times as large as the lethal dose and afterward potassium permanganate lived for a longer period of time than one given an ordinary lethal dose alone. If toxic doses of the cyanid were admixed with potassium permanganate, and the mixture permitted to stand for a few hours, no bad results followed its administration. The investigation points to the conversion of the cyanid under the influence of the permanganate into a hydrocarbonate, then into a carbonate, and finally into urea.

**Methyl-violet in the Treatment of Diphtheric Conjunctivitis.**—HILBERT (*Memorabilien*, xxxviii, 3, 138) has reported a case of diphtheric conjunctivitis successfully treated by the application with a brush thrice daily of a 3 per cent. aqueous solution of methyl-violet, in conjunction with warm fermentations. Subsequently, instillations of a solution of duboisin sulphate were practised, and the conjunctival sacs were frequently irrigated with tepid, sterilized water.

### For Eczema.—

R.—Acid salicylic. . . . . 3j.  
Zinci oxid. . . . . 3iij.  
Pulv. amyl. . . . . 3iv.  
Adipis lanæ hydrosi . . . . 3j.—M.

Ft. ung.

S.—Apply topically.

Practitioner.

### For Chronic Bronchitis.—

R.—Ammonii chloridi }  
Ammonii bromidi } . . . . . āā gr. xv.  
Pulvis ipecacuanhæ . . . . . gr. iij.  
Morphinæ hydrochloratis . . . . gr. j.  
Mucilaginis acaciæ . . . . . q. s.—M.

Ft. pil. no. x. S.—One night and morning.

Med. Press and Circular.



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SATURDAY, JULY 7, 1894.

## BERI-BERI.

ALTHOUGH the disease beri-beri is but rarely observed in this part of the world, a more than scientific interest is to be attached to it, inasmuch as sporadic cases are occasionally brought to our seaport towns from infected localities, and the possibility, under favorable circumstances, of extension is not to be ignored. A *résumé* of the more essential features of the affection may therefore be not entirely without utility, and a recent monograph<sup>1</sup> by one who has availed himself of the opportunity afforded by a long residence in Japan for a practical study of beri-beri, will be utilized as the basis of these remarks.

The etymology of the word beri-beri is obscure, although its source is believed to have reference to the impairment of gait, which is a noticeable feature in most, if not in all, cases. The first European description of the disease dates back to the middle of the seventeenth century, and was based upon observations made in the Malayan Archipelago, although descriptions of the disease, under the name of *kakké*, had been given in Chinese

and Japanese writings of a much earlier date. The geographic distribution of the disease includes a large portion of the tropical and subtropical countries of the two hemispheres, although the main seat of the disease is formed by the islands of the Malayan Archipelago, and particularly Sumatra, where the disease prevails both endemically and epidemically. It is also encountered in India, China, Japan, Africa, and South America. Only sporadic cases have been observed upon the continent of Europe and in North America, although Cuba has at times been an active seat of the disease.

At different periods in the past beri-beri has been viewed as either a rheumatic affection or as a constitutional disturbance of nutrition, but the modern and generally accepted view is that it is an infectious disease, probably of miasmatic type, developing under conditions of high temperature and moisture, and presenting the symptomatology of a multiple neuritis. The exciting cause is supposed to be a microorganism, animal or vegetable, though as yet no specific one has been conclusively isolated. The predisposing influences are numerous. The most important is race, the dark races, both native and foreign, suffering more than the white. The disease is more common in males than in females, a fact that is probably to be explained by a difference in the surroundings and mode of life of the two sexes. The largest number of cases occur between the ages of sixteen and twenty-five, and the disease is most prevalent in the months of July and August. The disease notably attacks those of sedentary habits. Debility or depression from any cause, such as previous illness, pregnancy, lactation, or the like, constitutes a predisposing influence. Beri-beri also, in turn, predisposes to the occurrence of complications and the invasion of other disease. In places where the disease prevails the acclimated are less liable to attack than the non-acclimated.

Four types of the disease are described, in accordance with the grouping and intensity of the symptoms: (1) An incompletely developed or rudimentary form; (2) an atrophic form; (3) a dropsical or dropsical and atrophic form; and (4) an acute pernicious or cardiac form. The rudimentary form may set in insidiously, with or without prodromes, including general malaise, fatigue, depression, headache. Frequently catarrhal symptoms are present, soon followed by weakness in the lower extremities, with numbness and edema, and indications of constitutional disturbance. These symptoms may persist

<sup>1</sup> Die Beri-beri-Krankheit: Eine geographisch-medicinische Studie. Von Dr. B. Scheuber, Fürstl. Physicus und Sanitätsrath in Greiz; früherem Professor an der Medicinschule in Kioto (Japan). 8vo; pp. viii, 220. Jena: Gustav Fischer, 1894.

for days or weeks, even for months, convalescence and recovery ensuing gradually.

In the atrophic form the onset of the symptoms may be insidious or abrupt. These consist distinctively in loss of power and wasting of the affected muscles. Improvement takes place slowly, months often elapsing before motility is restored. The dropsical form is characterized by the occurrence of general and widely-spread anasarca, involving the serous cavities as well as the subcutaneous tissues. Recovery is gradual. The acute pernicious form attacks preferably young, robust persons, and is characterized by the occurrence of symptoms of acute cardiac insufficiency. These may set in suddenly in the course of an attack of milder type, although as a rule the course of the disease is from the outset more acute.

The most conspicuous and most constant symptom of beri-beri is the impairment of motion. This begins in the lower extremities, and is of ascending type and of variable degree. Sometimes one side of the body is more affected than the other. In some cases the diaphragm suffers, sometimes the cranial nerves, particularly the pneumogastric. The paralysis is, as a rule, flaccid; exceptionally it is spastic. The irritability of the affected muscles is diminished with both forms of electricity, faradic contractility of both muscle and nerve being lost more rapidly than galvanic irritability. Mechanical irritability of the muscles is also diminished. The paretic muscles waste. Next in importance to these motor manifestations are the sensory symptoms. Cutaneous anesthesia or hypesthesia is almost constantly present. It is of variable distribution, and is proportionate to the severity of the attack, or of the remaining symptoms. Paresthesiæ are common and varied, as hyperesthesia is uncommon. There is little pain, spontaneous or induced. The cutaneous reflexes are as a rule preserved, while the knee-jerks are often wanting. Cerebral symptoms are not pronounced. Circulatory disturbances form an important part of the clinical picture of beri-beri. Among the most common of these are palpitation of the heart, oppression and dyspnea, epigastric pulsation, precordial distress, acceleration of pulse, diminution of arterial tension, cardiac hypertrophy and dilatation, functional cardiac murmurs. The urine is, as a rule, diminished in amount, and in some cases contains albumin. There are, further, symptoms of varying intensity of gastric and pulmonary derangement. The lungs sometimes undergo

a peculiar distention. The blood shows no distinctive alteration.

The usual termination of the disease is in recovery. In a proportion of cases this is not perfect; obstinate and incapacitating sequelæ sometimes persist. The most important of these is muscular weakness; others are defective sensibility and circulatory disturbances. The mortality varies with time and place, though always not inconsiderable. In acute cases, death usually results from heart-failure or from paralysis of the diaphragm. In chronic cases, and particularly when complicated with other diseases, death may take place from general exhaustion.

The essential lesions consist in a degenerative inflammation of the peripheral nerves, with a corresponding change in the muscles, and parenchymatous changes in the viscera. In some cases degeneration of the ganglion-cells of the anterior horns of the spinal cord has been observed. The spleen is moderately enlarged in acute cases. Various microorganisms have been found by different observers in the blood and organs of cases of beri-beri, but none has been conclusively demonstrated to possess specific properties.

The prognosis is uncertain, and must be based upon the circulatory condition. The prophylaxis is hygienic, and intimately related to disinfection, drainage, and water-supply. The treatment is climatic and symptomatic. Elevation is to be preferred, and a sea-voyage may be curative. Laxatives have always been looked upon as serviceable. In acute cases, salicylic acid and sodium salicylate have been strongly recommended. Digitalis is an indispensable remedy. In acute cases with cardiac insufficiency, venesection may be resorted to. In chronic cases, arsenic, iron, and quinin are indicated. In atrophic cases, subcutaneous injections of strychnin are useful, and the pareses may be materially improved by electricity.

## EDITORIAL COMMENTS.

*Hysterical Muscular Atrophy.*—The forms in which hysteria may disport itself can in all truth be said to be legion. There is virtually no morbid condition which this peculiar disease of protean manifestation may not reproduce. That the disease is not merely a psychosis, a derangement of psychic coördination, an analysis of its symptomatology must make perfectly evident. The clinical syndrome to which it gives rise is referable not only to the cerebral but also to the spinal and the sympathetic nervous systems as well. In a recent interesting communication, HIRT (*Deutsche medicinische*

*Wochenschrift*, 1894, No. 21, p. 459) points out that muscular atrophy may not only be of muscular and spinal origin and appear as a manifestation of hemiplegia, posterior spinal sclerosis, diabetes, etc., but that it may also represent a phase of hysteria. The peculiarity of hysterical muscular atrophy is that it is usually limited to one-half of the body, although exceptionally it involves a circumscribed nervous area, such, for instance, as that supplied by the distribution of the sciatic or the radial. Motility diminishes in direct proportion with the atrophy of the muscle-bundles. Under these conditions sensibility varies in the individual case. In exceptional instances it is normal; more commonly it is altered, more particularly common sensibility and the thermal sense, and complete anesthesia may occur. In some cases the atrophic process involves the entire voluntary muscular system, in the absence of appreciable wasting visceral disease. The diagnosis is based upon the psychic attitude of the patient and the occurrence of hysterical or hysterio-epileptic seizures. Hirt refers to three cases of general hysterical muscular atrophy and details one at length. This last occurred in a girl of thirteen years, who had suffered with others in the course of an epidemic of hysterical convulsions in a school, and from which recovery apparently resulted. Some time later the girl became ill, presenting general weakness, malaise, and sleeplessness; she became irritable and persisted in remaining in bed and refused nourishment. Soon, however, wasting became a prominent feature, although upon most careful examination no organic disease could be detected. Despite vigorous treatment the girl died, and upon post-mortem examination no lesion other than the muscular wasting could be found.

*Life-insurance Statistics.*—The report of the Medical Examiner-in-chief of the Royal Arcanum for the year 1893 contains some interesting statistics that seem worthy of reproduction. During the year there were received 3455 applications, of which 992 were rejected. Thirteen hundred and five deaths occurred among a membership of 143,192, a ratio of 9.11 per thousand. The largest number of these were distributed as follows: New York, 273; Pennsylvania, 147; Massachusetts, 145; Illinois, 110; New Jersey, 99; Ohio, 78; Arkansas, 14; Minnesota, 8. Of States in which the membership exceeded 500 the rate per thousand was highest in Arkansas (23.1) and lowest in Minnesota (3.5); in New Jersey it was 10.1, in Illinois 10, in Massachusetts 9.7, in Pennsylvania 8.7, in New York 8.6, and in Ohio 8. The largest number of deaths resulted from affections of the brain and spine (212, 16.2 per cent.), the smallest classified number from carcinoma (53, 4.1 per cent.). Tuberculosis was responsible for 194 deaths (14.9 per cent.), diseases of the heart and arteries for 156 (11.9 per cent.), diseases of the lungs, excluding tuberculosis, for 154 (11.8 per cent.), diseases of the digestive organs for 133 (10.2 per cent.), diseases of the kidneys for 125 (9.6 per cent.), casualties for 84 (6.5 per cent.), suicides for 60 (4.6 per cent.). There were 113 deaths (8.6 per cent.) from zymotic diseases; of these, typhoid fever was by far the most frequent. The largest number of cases of tuberculosis occurred in New York (47), with 22 in Massachusetts, 20 in Illinois, 17 each in New Jersey and Ohio, 13 in Pennsylvania, and 10 in

Maryland. In States having a membership of over 1000 the death-rate from tuberculosis was as follows: Massachusetts, 2.1 per cent.; Illinois, 1.8 per cent.; Ohio, 1.8 per cent.; New Jersey, 1.7 per cent.; Georgia, 1.6 per cent.; Tennessee, 1.5 per cent.; New York, 1.5 per cent.; Massachusetts, 1.5 per cent.; Michigan, 1.3 per cent.; Indiana, 1.3 per cent.; Virginia, 1.2 per cent.; Wisconsin, 1.1 per cent.; Missouri, 0.9 per cent.; Pennsylvania, 0.8 per cent.; North Carolina, 0.7 per cent.; Connecticut, 0.7 per cent.; Ontario, 0.3 per cent. Ten deaths resulted from appendicitis; six of the cases were subjected to some form of operation.

*"Whatever Pays is Right."*—The profession of medicine has been praised for, and professors of medicine have taken no little pride in, the fact that personal profit was not the sole end and supreme object of the practice of medicine. Recognizing that, like other men, they must live and, to live, must possess the means of livelihood, physicians have not affected to despise money, and have not hesitated to defend their claims to proper remuneration for services rendered. They have, however, subordinated the money-making or traders' spirit to the scientific or professional spirit, and have not been swayed to adopt a morally doubtful course, because it "paid" to do so. Nor have they thought that evil example excused or relieved from censure those who, knowing the example to be evil, followed it for purposes of gain. It appears, however, that in certain quarters there is entertained a confident belief that this is now to be changed. The report of an important committee of a representative association of physicians contains, as excuse for a course of conduct admitted to be morally censurable, the plea that others do the same thing; and for complete justification of this wrong-doing the statement that a considerable sum of money (elsewhere stated to be eight thousand dollars *per annum*) is gained thereby. For those who admit the force of such arguments, the demonstration is convincing. By the same logic, United States Senators are justified in speculating in stocks the price of which is influenced by their legislative action. "Others do it. It pays." The parallel is complete. While, however, those who have wire-pulled themselves into office in the United States Senate or elsewhere may be willing to acknowledge as their standard of morality, the motto: "Whatever pays is right," we are unwilling to believe that the physicians of America will indorse the action.

*Abominable Landscape Advertisements.*—Lord Rosebery, the Prime Minister of England, lately asked: "What is to become of our landscape if it is to be simply a sanitary or advertising appliance? Think of the feelings of the illustrious Turner if he returned to life to see the luggers and the coasting ships, which he made so glorious in his paintings, converted into a simple vehicle for the advertisement of a quack medicine."

If Lord Rosebery is offended in England, what would be the state of his feelings if he should travel in the United States? We know a gentleman who will not, if avoidable, make the trip between Philadelphia and New York in the daytime, because of the hideous and nauseating advertisements that glare at him from every barn and field. At Milwaukee last year the medical visitors who perchance visited the Park were astonished at the



filthy deviltry daubed on huge boards for the education of every girl, boy, or woman who might enter.

The worst of all this matter is the double encouragement of disease by first poisoning the minds of the hysterical and pathologically inquisitive, and then inducing more genuine disease by the effects of the vile concoctions. The advertisement encourages the imagination of disease, and then creates the reality by the "cure." Cannot the landscape-advertisement curse be stopped by law?

*The Complications of Gonorrhea.*—Although the gravity of the complications of specific urethritis has long been recognized, the mode of origin of those not arising by immediate continuity or contiguity has not been clear to the point of demonstration. Recent observations, however, tend to show that these secondary manifestations represent a result of the transference of the specific etiologic factor of the disease—the gonococcus of Neisser. A brief note in *THE NEWS* of August 19, 1893, p. 217, details the finding by Leyden of gonococci at the seat of an endocarditis occurring in the course of an attack of gonorrhea complicated also by synovitis. Stronger evidence of the same nature is furnished by BORDONI-UFFREDUZZI (*Deutsche medicinische Wochenschrift*, 1894, No. 22, p. 484), who, in a paper read before the Eleventh International Medical Congress, recently held at Rome, related a case of gonorrhea complicated by polyarthritis, in which in the pus removed from an affected joint he was able to demonstrate the presence of gonococci, and with cultures from the second generation of which he was successful in inducing gonorrhea in a subject that volunteered to submit to the experiment. He also refers to a case of gonorrhea complicated by bilateral pleuritis, polyarthritis, pericarditis, and endocarditis reported by another observer, in which gonococci exclusively were found in fluid removed from the pleural cavity.

## REVIEWS.

A TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE BY AMERICAN TEACHERS. Edited by WILLIAM PEPPER, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. In two volumes. Illustrated. Vol. II. 8vo, pp. 1046. Philadelphia: W. B. Saunders, 1894.

THE best and most important contribution to Vol. II of Pepper's *Text-book* [which must not be confounded with the more elaborate *System of Medicine*, edited by the same teacher and published by Lea Brothers & Co.] is that of Prof. William H. Welch upon the "Biology of Bacteria, Infection and Immunity." Clear, concise, comprehensive, and accurate, it condenses and elucidates for the practising physician the accepted results of modern research. A thorough grasp of the subject is essential to success in diagnosis and treatment, and hence we warmly commend these chapters to careful and repeated study. Diathetic Diseases, including gout, diabetes, rheumatism, obesity, biliary lithiasis, etc., are well treated by Prof. Henry M. Lyman; Diseases of the Blood, of the Supra-renal Capsules, and of the Ductless Glands, by Prof. Osler, concerning whose work

comment is usually superfluous and adverse criticism impossible. Diseases of the Heart and Vessels and Diseases of the Mediastinum have been written of by the Editor. We have been especially pleased with the chapters upon valvular diseases. Prof. J. C. Wilson writes clearly and succinctly concerning Diseases of the Nose, Larynx, Bronchi, and Pleura. In the sections on the upper air-passages much has been sacrificed to brevity. Prof. Delafield treats authoritatively of Diseases of the Lungs and Diseases of the Kidneys. In both articles the pathologic and clinical sections are full and thorough, but those on therapeutics are not satisfactory. Practical Urinalysis is well set forth by Prof. J. W. Holland. He fails to give his opinion, however, concerning the reliability of some of the more delicate tests for albumin. The chapters on Diseases of the Mouth, Tongue, Pharynx, Tonsils, Esophagus, Stomach, and Intestines are by Prof. Pepper. They are full and on the whole reliable, though we can hardly agree with the opinion that herpetic pharyngitis is a rare affection. Prof. Reginald H. Fitz's contributions on Diseases of the Peritoneum, of the Liver, and of the Pancreas are admirable in every respect. Probably no other text-book contains an article on the pancreas at all comparable with this.

As a whole we commend the book. Its peculiar excellences are in such articles as Welch's, Delafield's, and Fitz's, but every author has done good work.

THE DISEASES OF CHILDREN (MEDICAL). By H. BRYAN DONKIN, M.D., Oxon., F.R.C.P., Physician to the Westminster Hospital and to the East London Hospital for Children, at Shadwell; Joint Lecturer on Medicine and Clinical Medicine at the Westminster Hospital Medical School. New York: William Wood & Co., 1893.

DR. DONKIN has succeeded in furnishing us with a book of 424 pages, which is interesting, instructive, and somewhat novel in its device. It is hardly suited to students, as, indeed, the preface indicates, as it does not attempt to be complete. For instance, mental diseases are not discussed at all, and some other subjects are also omitted. The author, too, has made no effort to give a full description of each disease considered, but rather to call attention particularly to the points pertaining to children; while he refers more briefly to the symptoms as seen at any age, assuming that these are already known to the reader. Considering this fact, the introductory observations on the method of examining children, and on the special characteristics of diseases in them might with advantage have been fuller. Still, remarks on this topic are found in abundance scattered through the book under the different headings.

Space does not permit an analysis of the various sections of the volume. The amount of attention given to the different diseases seems, on the whole, very fairly distributed, although occasionally one or another of them is cut rather short.

The various subjects are not formally classified under etiology, pathology, and so forth, as in an ordinary text-book, but the diseases are considered somewhat discursively in a pleasant, rather conversational style, with emphasis laid here and there on matters especially important in their relation to childhood, and with a repre-

tion of observations drawn from the writer's wide and long experience. This method of writing makes the book very interesting reading. In fact, the more one reads it the better is one pleased.

We can very heartily recommend the volume to those wishing to add to their libraries a valuable work of reference for frequent consultation. It is not, as we have said, so serviceable to those who wish to limit themselves to one or two works on pediatrics.

**CLINICAL LECTURES ON PEDIATRICS.** Delivered in the Vanderbilt Clinic during the Session of 1892-93. By A. JACOBI, M.D., Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons of New York. Pp. 195. Stenographic Reports, Bailey & Fairchild. Reprinted from the *Archives of Pediatrics*.

THIS clinical volume represents a fair example of the practical instruction given in the children's clinic of the College of Physicians and Surgeons, as the author remarks, both with the merits and demerits of extemporaneous discourses. Being stenographic reports exclusively, there is a natural charm about them that is not present even in the best systematic writing of the best authors, and while reading them one does not require a vivid imagination to feel the presence of the lecturer, the patients, and the students. There is much in the work that is instructive, and there is authority, learning, and extended experience in every paragraph. The author is a clever diagnostician, an excellent clinician; but when he invades the domain of the strictly surgical affections, the result is sadly disappointing. Instead of condemning all the measures he cannot himself control, as aspirations and injections, the physician should courteously refer all strictly surgical affections to the surgical staff. The time has come for specialism in the surgical diseases of children, and such conditions as spondylitis, congenital dislocation of the hip, syphilitic periostitis, spina bifida, etc., should be dismissed by the physician when a diagnosis has been made. Surgical science has made such swift strides during the last twenty years that it is impossible for the general physician, no matter how skillful, to keep up with the van.

## SOCIETY PROCEEDINGS.

### AMERICAN GYNECOLOGICAL SOCIETY.

*Nineteenth Annual Meeting, held at Washington, D. C., May 29, 30, and 31, 1894.*

FIRST DAY—MAY 29TH.

AN Address of Welcome was delivered by DR. FRY, Secretary *pro tem*. Then followed a discussion on "Extirpation of the Uterus in Disease of the Adnexa," which was opened in the affirmative by DR. J. M. BALDY, of Philadelphia. He maintained that the uterus had but one function, to contain and develop the embryo. When the ovaries are removed this function of necessity is destroyed, and the organ becomes a useless one. It has been proved that all patients are not cured after an operation requiring double oöphorectomy. Many complain of pain, metrorrhagia, and muco-purulent leukorrhea. The question as to whether or not patients are cured after

hysterectomy when double oöphorectomy has failed, can only be answered by the results of experience. Personally, Dr. Baldy has cured patients by a secondary hysterectomy. He felt certain that the operation of hysterectomy does not increase the mortality above that of double oöphorectomy. On the contrary, he has found that not only has hysterectomy in his hands lessened the mortality very markedly, but it has also rendered the convalescence infinitely smoother, easier, and more satisfactory. Not only is the uterus after double oöphorectomy a useless organ, but he believes that its retention in the body is of disadvantage, or even danger to the patient. The fact that the pelvic floor is more likely to sink to a lower level after the removal of the appendages than after hysterectomy, is a strong argument in favor of complete extirpation. He said that 20 per cent. of all pustules are of tuberculous origin, and the danger of the disease reappearing in the retained uterus should be a strong reason for removing all of the internal genitalia. Hysterectomy is the preferable operation in a certain percentage of cases. Uterus, tubes, and ovaries should not be removed in all cases of pelvic inflammatory disease; but when, after abdominal section, the womb is found enlarged and diseased, especially if it has not been surrounded by extensive adhesions, the destruction of which leaves large areas of denuded peritoneum, hysterectomy should be the operation of choice. Even in cases in which during an operation the uterus has been largely denuded of its peritoneal covering, hysterectomy should be performed. When there is good reason for believing that the uterus will at some time in the future become the seat of disease, the organ should be removed, or when the danger of hemorrhage may be avoided, hysterectomy should be performed. The abdominal method of operation is the one of choice, because all of the parts are exposed to the eye as well as to the touch, and hence greater accuracy and security can be obtained; and intestinal injuries may be readily discovered and corrected, and complete removal of the adnexa may be insured. Drainage may be avoided by absolute closure of denuded surfaces.

DR. FLORIAN KRUG, of New York, spoke of the results following the Hegar-Batley operation, which were at one time considered gratifying. Its limitations are, however, now recognized. While the appendages were removed, the essential and primary cause of the trouble was retained. The continuance of distressing symptoms is to be attributed to the primary lesion in the diseased uterus, to the effects of premature and artificial menopause upon the sympathetic nervous system, to the irregular and delayed involution of the uterus, and to the adhesions formed between the intestines and raw surfaces in the pelvis. Then there must be added the possibilities of repeated reinfection of the uterus and of ventral hernia, in consequence of different methods of drainage. Histologically, the tubes are but part of the uterus, and their removal is a partial removal of the uterus. Why not go a step further and remove the whole of the diseased organ? The primary situation of the disease is in the uterine cavity, and the tubes are involved by direct continuity of tissue. He asserted that in the hands of those familiar with the technique of hysterectomy the mortality is less than that of celiotomy. He objected to the vaginal method of operation.

DR. H. T. HANKS, of New York, said that whether the uterus should be left or removed in any individual case of diseased adnexa can only be determined when the character of the disease, as well as the condition of the uterus, is considered. In a number of cases all of the troublesome symptoms persist after thorough hysterectomy. Fewer after-symptoms are observed to follow hysterectomy for fibroid uteri than when only the tubes and ovaries are removed. The drainage through the vagina after hysterectomy is the ideal drainage. There are three conditions in which, upon theoretic grounds and from practical experience, he would advocate the entire extirpation of the uterus, in addition to the appendages: when there is an old or recent pyosalpinx, with much exudation, and with a purulent endometritis, or a chronic catarrhal endometritis; when there is a puerperal salpingitis and ovaritis, and probably a puerperal endometritis; when, in removing the diseased tubes and ovaries many adhesions are broken up, and when the uterus is retroflexed or retroverted and held firmly down by exudates—in other words a perimetritis in which the diseased tubes and ovaries, together with a retroverted or retroflexed uterus, are all displaced, diseased, and bound down in Douglas' cul-de-sac by plastic exudation.

DR. BACHE EMMET, of New York, contended that the position that the primary disease may be more thoroughly eradicated by removing the uterus cannot be consistently maintained. Either there is an occlusion of the tube at that point, in which case there can be no infection, as there is no morbid material present, or it may be inert, or, if the tube be opened, it could be drained by the uterine cavity and the patient cured without resorting to ablation. It is maintained that the uterus may still be the seat of symptoms in the absence of actual disease. In such a case there would be reason to suspect an error in diagnosis or that the operation had not been perfect. The difficulty and danger of hysterectomy should always be borne in mind.

DR. W. GILL WYLIE, of New York, would not agree that the uterus should always be removed with the tubes and ovaries. It should be removed, however, in case of malignant disease, in case of fibromata, in case of other intractable disease, and, as a rule, when the patient is over thirty-five years of age. His experience has shown that when the uterus is removed with the tubes and ovaries there is less of the reflex disturbance common in women at the menopause, who have or have had disease of the uterus, than there is in similar cases when the uterus is not removed with the tubes and ovaries. He does not think, however, that the uterus should be removed regardless of its condition.

DR. WILLIAM H. WATHEN, of Louisville, expressed opposition to hysterectomy for diseased appendages in nearly every case. Only in case of malignant disease of the uterus or of a myoma of that organ should the operation be performed. The majority of the women recover permanently after removal of the ovaries.

DR. EDEBOHLS, of New York, said that there are two reasons for removing the uterus with the tubes and ovaries: when it is desired to obtain absolutely good drainage down to the vagina, and when the organ is so diseased that curettage and ventro-fixation would be insufficient to restore it to health.

DR. CUSHING, of Boston, expressed a preference for

the glass drainage-tube from above, for the reason that the vaginal drainage from the bottom of the vagina does not reach the lowest portion of the pelvic cavity.

DR. JANVRIN, of New York, maintained that with the improved methods for ablation of the uterus very little shock is added, and, as a rule, the prolongation of the operation is limited to a very few minutes. He would not remove the uterus, however, unless there was some actually diseased condition of the organ visible to the eye.

DR. CHARLES P. NOBLE, of Philadelphia, said that he saw no reason for taking out the uterus unless some definite purpose was to be accomplished. Of course it should be removed in all cases of tuberculosis, or in cases of fibroid and carcinoma, but in all the acute inflammatory conditions of the uterus, unless there is an abscess with destruction of its walls, the organ promptly gets well after the tubes and ovaries are removed. In chronic conditions he would perform hysterectomy if the woman could stand the operation.

DR. PRYOR, of New York, said that removal of the uterus precludes the possibility of further disease of that organ, of displacement and irregular atrophy; the menopause is short; there is nothing left to keep up the neuritis; atrophy of the genitalia is not hastened or exaggerated, and there is entire relief from subjective symptoms. He tries to remove every filament of nerve-tissue about the cervix, and to make the extirpation as complete as possible; he is opposed to the retention of even a portion of the cervix. He believes that as much comfort can be afforded cases of suppurative inflammatory pelvic disease by palliative measures applied from the vagina as can be obtained by removal of the adnexa only.

DR. A. P. DUDLEY recommended hysterectomy in puerperal infection, when the operation must be done hastily to prevent general peritonitis; and in extensive pyosalpinx, and diseases in which the uterus has been adherent so long in the pelvis that to break up the adhesions would destroy the tissue. He does not think it necessary to remove the uterus for catarrhal endometritis.

DR. BALDY, in conclusion, said that he never uses drainage in these cases. The operation of hysterectomy is not to be performed in catarrhal salpingitis and endometritis, but only when there is suppurating disease.

DR. EDWARD K. REYNOLDS read a paper on the "Management of Face-presentations." He said that face-presentations are frequently caused by some mechanical complication of labor, such as a flat pelvis, or a small fibroid in the lower uterine segment, or it may be complicated by prolapsed funis, hemorrhage or eclampsia. In the first stage, with the membranes unruptured, flexion with presentation of the occiput should be secured. The membranes must be preserved, and hence vaginal examinations should be avoided. The patient should be laid on the side to which the fetal abdomen is directed, and if flexion does not take place, the woman should be placed in the knee-chest position. This failing, Schatz's method should be tried. When the membranes rupture early, version may be performed, the back being brought down, or the head may be flexed by manual means. The objection to version is the great fetal mortality, probably as a result of compression of



or traction on the cord. Hence version should only be performed in case of early rupture of the membranes. In the second stage, the treatment depends upon the position of the child. In mento-anterior positions Nature may be left to itself. The fetal heart must be watched, however, on account of the danger from compression of the vessels of the neck. In case operative procedures are required, manual flexion of the head should be preferred. The application of forceps to the face, high up, should be reserved as a last resource, because of the difficulty of its performance. In mento-posterior positions flexion by the hand should be performed. The opinion was expressed that in these neglected cases the vitality of the child will almost invariably be seriously compromised, and the mortality of the abdominal operation is so high that craniotomy should be resorted to.

DR. CHARLES JEWETT said that he regarded the mechanism of face-birth as abnormal and as frequently constituting a serious complication of labor. He thought that presentation by the face is more frequently associated with other complicating conditions, such as small pelvis, large child, prolapse of small parts, than are vertex-births. In the matter of treatment, he makes two general classes of cases: 1. Those in which the head is movable at the brim, or can be made so by pushing it up. 2. Those in which the head is permanently engaged in the pelvis. In the first class, when the chin is anterior, interference is not as a rule required. When the chin is posterior, if all other conditions are favorable, spontaneous birth is generally possible, although the child is more exposed to dangerous pressure than in vertex cases. He would, therefore, in such cases prefer to bring down the vertex under anesthesia. In the second class of cases, spontaneous evolution takes place with but few exceptions. Rotation is to be favored by placing the patient on the side to which the chin points, in conjunction with upward pressure on the forehead or downward traction on the chin during the pains. If the head is immovably fixed in the pelvis, symphysiotomy may be performed, unless the child is weak and the mother's condition is unfavorable. Then craniotomy must be done.

DR. CHARLES P. NOBLE, of Philadelphia, suggested that in neglected anterior positions symphysiotomy might be performed. In case of posterior position he would also prefer symphysiotomy if the child were living.

DR. EDWARD P. DAVIS, of Philadelphia, urged the importance of early diagnosis of this complication. The treatment best adapted to secure spontaneous labor in face-presentation consists in retaining the membranes unbroken until the time of spontaneous rupture, in sustaining the patient's strength by suitable feeding, stimulation, and anodynes, and in placing the patient in a position to favor anterior rotation of the chin. Symphysiotomy is of too recent date to occupy an established place in the treatment of neglected cases. Still he thought it has its place.

DR. MURRAY thought that face-presentations usually resulted from a disproportion between the size of the head and the diameter of the pelvis. He thought that symphysiotomy would tend to reduce the mortality and lead to a great many more spontaneous deliveries.

DR. FRY suggested the value of Trendelenburg's position in performing flexion of the head. He has seen

it work very nicely, and believes that it aids in the necessary manipulation.

DR. WILLIAM T. LUSK, of New York, said that it is not easy to flex the head or to rotate the chin anteriorly. If the chin is directed transversely the application of the forceps and the rotation or flexion of the head are very difficult. Symphysiotomy does away with all of these difficulties.

DR. MATTHEW D. MANN, of Buffalo, thought that nearly all of the cases of face-presentation could be treated best by a new position of the head. He thought that by the use of anesthetics we can accomplish all that is done by posture in the treatment of these cases.

In closing, DR. REYNOLDS said that he could not believe that symphysiotomy could ever be indicated in uncomplicated face-labor, unless in the treatment of persistently posterior positions within the pelvis. He would rather sacrifice a few of the children, in whom mortality is at best low, than to perform symphysiotomy.

DR. WILLIAM R. PRYOR, of New York, read a paper on "The Abuse of Trachelorrhaphy." He stated that he regarded laceration as merely a mutilation of the cervix, and that it was impossible for such a mutilation to produce the train of symptoms usually ascribed to it. The cervix is only a sphincter muscle, and it is improper to lay the charge of sterility at its door. He regarded subinvolution as due to the prolonged labor and not as resulting from division of the cervical tissue. While carcinoma of the cervix is becoming quite common, he believed it to be due to the existence of embryonic tissue in the uterus, and not to the tear in the cervix. The only cases that demand trachelorrhaphy are those attended with severe hemorrhage, or those in which the tear extends up to the vaginal junction. In those cases in which the tear is extensive and marked hypertrophy existed, amputation is the operation required. He was not in favor of suturing the cervix, for the reason that this rendered the canal too small for future labors.

DR. HENRY T. BYFORD, of Chicago, agreed in believing that trachelorrhaphy is too frequently performed. In cases of deformity of the cervix Schroeder's operation is the best, for in such cases simple trachelorrhaphy would not meet the requirements. In cases of deep tear, with hemorrhage, sutures should be immediately introduced. Subsequent sepsis may thus be prevented.

DR. J. M. BALDY, of Philadelphia, thought that the pathologic conditions found subsequently to lacerations result from the leukorrhoeal discharge and not from the tear itself. All lacerations associated with eversion and erosion should be repaired.

DR. CHARLES P. NOBLE, of Philadelphia, did not regard lacerations of the cervix as normal, nor does laceration occur in every parturition. He stated that, according to recent statistics, carcinoma is as common in the negro as in the white woman. Carcinoma occurs usually in women that have given birth to many children. All severe cases of laceration require operation, and in some cases Schroeder's operation is the preferable one.

DR. ENGELMANN, of St. Louis, thought that the extent of injury and the pathologic condition found should be the guide as to the operation required. He did not believe that laceration occurs in every labor; when it does occur,

if the tear extends beyond the crown of the cervix, operation is indicated.

DR. GORDON said that the operation of trachelorrhaphy has been performed too frequently and without proper forethought for the after-results. He believed that laceration occurs whenever the cervix was originally too small. Now if such a torn cervix be sutured, the original abnormal condition will be restored. In cases associated with hypertrophy and hyperplasia, curetment and the application of pure carbolic acid will be productive of much good.

In closing, DR. PRYOR said that there should be no place in gynecology for the operation of trachelorrhaphy. Other methods would be followed by much better permanent results.

DR. EDWARD P. DAVIS, of Philadelphia, read a paper entitled "Fatal Nausea and Vomiting of Pregnancy," which will be found on p. 597 of THE MEDICAL NEWS, of June 2d.

DR. EDWARD R. REYNOLDS stated that he is in the habit of performing abortion at once in such cases, for the reason that there usually exists some structural alterations that require such a radical course of treatment. If the vomiting were allowed to go on, anemia would supervene, and the danger lay in that condition. If the patient be allowed to go on until the absorptive system had lost its power of supplying the body, even abortion would fail to save the patient's life; this in some cases seemed to hasten the fatal issue. If the expectant plan of treatment be adopted great judgment must be exercised.

DR. W. GILL WYLIE, of New York, stated that in his hands the use of steel dilators in this condition had been followed by considerable success. Dilatation and relief of the congestion was followed by good results. There usually existed some pathologic condition to account for the reflex symptoms present. Dilatation, to be effective, should be carried up to the internal os.

DR. MATTHEW D. MANN, of Buffalo, spoke of the great difficulty experienced in ascertaining the cause of the condition in any given case. He reported the case of a woman married seven weeks, six of which had been spent in vomiting. After abortion had been induced a fibroid was discovered, which was presumably the original cause of the pernicious vomiting. Dr. Mann advocated the immediate induction of abortion in urgent cases.

DR. CHARLES JEWETT stated that he had seen many cases of this condition, but had failed in any to discover a pathologic state that could account for the symptoms. He admitted that some histologic changes might have existed. He claimed that great benefit might be derived from dilatation of the cervix, which is both a sure and a safe procedure. He protested against allowing patients to go too far before active measures are instituted.

DR. A. PALMER DUDLEY said that he had treated five cases of very obstinate vomiting of pregnancy. He thought that there could be no doubt that the condition is a neurosis, and that the cause lies in some local condition of the generative organs. He was in the habit in such cases of packing the vagina and treating whatever pathologic condition he found to be present. He had found painting of the cervix with cocain to have been beneficial. He also administered cocain internally as well as camphor monobromate.

In closing the discussion DR. DAVIS insisted upon the importance of retro-sternal pain and coffee-ground vomit as danger-signals in this condition. Whenever they appeared they called for prompt surgical interference.

DR. E. C. DUDLEY, of Chicago, presented a paper on "Myomectomy as a Substitute for Hysterectomy." He first gave a history and a description of the various operations advocated for the removal of neoplasms in and around the uterus, and dwelt upon their relative merits. He stated that his objection to the operation of hysterectomy is that it removed the generative organs from the woman. To prevent this mutilation he has devised an operation for the removal of myomata from the uterus, at the same time preserving this important organ. He described in detail his operation and reported the histories of twenty-five cases in which he had operated for the removal of tumors of various sizes and with varying complications, the whole being accomplished without a single death. In some of the cases the appendages also were removed because of disease; in such cases, however, he would suggest removal of the entire uterus. He believed that in many cases in which the uterus is the seat of a myoma the tubes and ovaries are in a normal condition, and in such cases removal of the tumor is all that was indicated.

#### SECOND DAY—MAY 30TH.

The Presidential Address, on "The Proper Position of Recent Surgical Methods in the Treatment of Uterine Fibroids," was delivered by DR. WILLIAM T. LUSK, of New York. After an historic review of the surgical procedures proposed for the removal of uterine fibroids, he declared his belief in postponing hysterectomy or even myomectomy until every other method of treatment had been given a fair trial. He gave as his reason for such a position that many myomata remain stationary in their growth for years or even disappear spontaneously after pregnancy and curetment. He prefers Apostoli's method for small fibroids. He claimed that great improvement frequently follows palliative measures, while much unnecessary suffering and harm are entailed by the so-called radical treatment. He stated that whenever the uterine tissues are over-nourished the myomatous growths increase rapidly in size, and he suggested the treatment and correction of this hypernutrition as the main indication under these circumstances. He thought the first duty of the gynecologist should be to prevent the loss of the reproductive organs whenever possible. He advocated, when possible, the dilatation of the cervix and removal of the growth through that channel. He thought that the only indications for abdominal hysterectomy is the presence of many adhesions or of multiple tumors or other complications. Taking into consideration the published statistics, he was inclined to believe that vaginal hysterectomy should be preferred to abdominal hysterectomy. He grouped the following disadvantages of the suprapubic method: the disfigurement produced by the cicatrix, the great liability to hernia ultimately, adhesions of the omentum, and the immediate dangers consequent upon exposure of the intestines to the air and the shock. He thought that all tumors larger than a child's head should be removed from above. He did not favor castration for the

relief of fibroid tumors, for the reason that though at times successful, very often the patients would ultimately return suffering as severely as before the operation. In all cases of advanced growths extirpation of the involved organs, either complete or partial, would be the best plan of procedure. Pedunculated growths may be removed by simple ligation; large cystic and multiple growths by the supra-vaginal route, and then, if necessary, hysterectomy may be performed. In the treatment of the stump it seemed to him that the retro-peritoneal method was the one of election.

DR. POLK, of New York, thought that the tendency is toward myomectomy rather than hysterectomy. He considered the retention of the uterus as of paramount importance whenever possible, and was strongly in favor of myomectomy. He thought it quite as feasible and safe to remove the growth through the peritoneum as through the vagina. He did not think that an accompanying pyosalpinx indicates an inability on the part of Nature to carry on ovulation, and that therefore castration, hysterectomy, or complete extirpation should be performed.

DR. J. M. BALDY, of Philadelphia, stated that he was in favor of completely removing all the generative organs, and that no uterine tissue should be left *in situ* for fear of forming a nidus for the development of tuberculosis. He did not favor myomectomy, for in that operation complete removal of the diseased tissue, especially *per vaginam*, would be impossible. The vaginal operation also precluded all knowledge as to the condition of the appendages. By the abdominal operation a thorough visual examination of the parts could be made and proper treatment instituted. He contended that myomectomy from above had been abandoned because of the danger from hemorrhage from the divided uterine tissues, which would shrink notwithstanding the application of ligatures. Hysterectomy does away with all such dangers.

While it is true that ligation of the uterine artery might cause shrinkage of the tumor, a collateral circulation might be set up, and in this way the growth receive sufficient nourishment for it to increase in size.

DR. CUSHING, of Boston, said that he could not see why myomectomy should be preferred to hysterectomy. A myomatous uterus was of no benefit to the patient. Whenever there are associated pain and hemorrhage there is always involvement of the tubes and ovaries. He did not favor the vaginal operation, because the diseased tissue could not be removed *in toto*. Only in cases of small tumor should vaginal hysterectomy be performed.

DR. GORDON advocated conservatism as far as practicable, but would operate whenever operation was necessary. He did not favor vaginal hysterectomy at all, and could not understand why diseased structures should be retained.

DR. W. GILL WYLIE, of New York, said that Dr. Lusk's suggestions were feasible for uncomplicated fibroids only. Generally, however, the conditions are so complicated that hysterectomy is preferable. He is in the habit of removing the whole uterus in cases of unmarried women who do not expect to marry. In young married women he resorts to curetment and palliative measures, such as myomectomy with retention of the

tubes and ovaries. In women over thirty-five or forty he prefers hysterectomy. He believed that women suffering from fibroid tumors are more likely to develop carcinoma than other women.

DR. HENRY T. BYFORD, of Chicago, stated that it had been his intention to read a paper on the subject of the "Results of Vaginal Fixation of the Stump in Abdominal Hysterectomy," but that he would instead confine himself to a brief description of his method of operating and to a discussion of Dr. Lusk's paper. He stated that he agreed almost entirely with Dr. Lusk, and that he had no patience with those operators who advocated complete removal of the uterus in all cases of fibroid tumor. He stated that under palliative treatment he has been enabled to maintain many patients in a very comfortable condition for many years, even ten or fifteen. His treatment consisted in packing, curetment, and so forth, without radical operation. He has never seen any of these cases develop carcinoma. He endeavors to convert the tumors into polypoid growths by the administration of ergot internally, and traction on the growth; then he dilates the cervix and enucleates the tumor. Whenever operation has to be performed, he thought the pedicle should be treated extra-peritoneally above, or else the cervix should be removed, and the stump turned into the vagina and there secured. Drainage was advised.

DR. ENGELMANN expressed regret at the manifest feeling against vaginal hysterectomy. This method, he thought, was preferable to the abdominal method, because of the absence of shock and of exposure to the risks of the supra-vaginal method. The danger of vaginal hysterectomy, he admitted, was the difficulty of controlling hemorrhage.

DR. A. P. DUDLEY thought that Dr. Lusk's paper tended in the right direction. He thought that myomectomy had come to stay, and said that either method, vaginal or suprapubic, could be employed. In multipara, when the cervix is greatly diseased and the woman is past the meridian, he advocated complete removal as giving the best results.

DR. E. C. DUDLEY, of Chicago, thought that the condition found in any given case should be the guide for operation. Hysterectomy is indicated at times, and at other times myomectomy. He thought the dangers of myomectomy very pronounced, and that vaginal hysterectomy offered good results in the great majority of the cases.

DR. WILLIAM H. WATHEN, of Louisville, preferred myomectomy whenever practicable, so as to save to the woman her childbearing organ.

In closing, DR. LUSK said he hoped that when the subject should be brought up again the statistical era would have been passed, and the exact position of the two operations have been determined.

DR. CHARLES M. GREEN, of Boston, read a paper on "Rupture of the Uterus; Palliative versus Surgical Treatment." He stated that the treatment should be guided by the extent of the tear and the state of the patient. By "palliative treatment" was meant the sustaining of the patient by nourishment and stimulation, the use of antiseptics, and the control of hemorrhage by tampons. Celiotomy does not offer the good results that were hoped for. He reported several cases



in which recovery had taken place after rupture under palliative treatment. It is better to pursue this course than to expose the patient, already in a dangerous condition, to the shock of an abdominal section and the effort to arrest hemorrhage by suturing the uterus. The tissues are usually so irregularly lacerated that perfect apposition is impossible, and sutures would not hold in the friable structures. The palliative treatment he suggested was the use of compressive bandages, cold irrigation, tamponment of the rent with wicking and gauze, and drainage. Celiotomy should never be performed unless the issue seemed to be fatal or the child had escaped into the abdominal cavity and could not be extracted through the natural passages. Then the abdomen should be opened, the child removed, and the uterus sutured. After extracting the child uterine massage, ice-compression, and bimanual pressure should be employed. A tampon, properly employed, would control the hemorrhage. Irrigation through the rent into the abdominal cavity is not indicated unless the amniotic fluid has escaped into the peritoneal cavity. A better plan would be the injection into the cavity of a hot physiologic salt-solution. This would be absorbed and the volume of the blood increased. The peritoneum is very tolerant of aseptic blood, and there is no need of removing it at once. He urged a trial of the palliative method whenever severe hemorrhage does not indicate celiotomy.

DR. MALCOLM MCLEAN believed that palliative treatment is proper in almost all cases. He did not believe in performing version save in those cases in which the child is above the pelvis; then the child should be brought down by version and at the same time the condition of the rent be examined. If the intestines were protruding or the placenta and contents of the bag of waters had escaped into the abdominal cavity, abdominal section should be performed. It is a great mistake to think that rupture of the uterus always indicates celiotomy. Whenever there is recession of the presenting part the operator should promptly draw down the child to prevent its complete escape into the abdominal cavity and the formation of a large hematoma, which would greatly hinder the successful performance of celiotomy should this become necessary.

DR. WILLIAM T. LUSK, of New York, thought that in cases of incomplete rupture situated in the posterior wall of the uterus palliative measures are indicated. In cases of tears situated anteriorly a fatal issue generally results. In cases of complete tear he would prefer to bring together the peritoneum and close the wound, so as to give the woman a better chance. The uterus itself should never be sutured. He is not in favor of performing Porro's operation in this class of cases. He advised complete removal of the uterus when the tear is great and the tissue considerably infiltrated.

DR. EDWARD R. REYNOLDS, of Boston, thought that the treatment should vary according to the direction of the rupture. Those occurring elsewhere than in the posterior uterine wall, low down, required, in his estimation, complete removal of the uterus.

DR. E. P. DAVIS, of Philadelphia, called attention to the pathology of these cases. He said that rupture of the uterus occurs more frequently in multiparous women who had previously suffered from some septic condition

of the uterus, and thus it is impossible to hope for good results unless the uterus is completely removed.

DR. POLK, of New York, considered these cases as grave in every instance. The most important thing to do was to empty the uterus and see that nothing was left behind. It would be hard to do this through the vagina. He had frequently irrigated through the vagina, but when he had been compelled afterward to open from above he had found that the water had failed to cleanse the abdominal cavity. He thought it was better to deliver by the natural passages, if possible, but to make a small opening above and cleanse in that way. If the uterus is much mutilated he favors complete removal.

DR. MURRAY believed in treating the case according as the tear is complete or incomplete. He has seen four cases, two of which were fatal. If the rupture has taken place into the peritoneum it is better to open the abdomen and drain.

DR. MALCOLM MCLEAN insisted that if the fetal membranes are intact, even if the rupture has been into the peritoneum, they are protective, preventing the introduction of infectious material, and under these circumstances the case should be treated differently. The simple oozing of aseptic blood into the peritoneal cavity can do no harm.

DR. W. GILL WYLIE, of New York, read a paper on "The Influence of Laceration of the Perineum on the Uterus, and the Operation for its Repair." He had no doubt that there is much yet to learn as to the results of laceration of the perineum, and the best methods of repair. For some time past he has been pursuing extensive studies in this direction, and believed that he had now arrived at the best method of operating upon an old laceration, especially when a rectocele is present. The general supposition is that in all ruptures of the perineum into the rectum there must necessarily follow a displacement of the uterus. This, however, is a mistake. If the rupture take place in the median line, even though it extend through the sphincter muscle of the bowel, there is no subsequent displacement of the uteri. If, however, the levator ani muscle is separated on both sides, then the continual straining at stool will eventually bring down the uterus. He was of the opinion that the anatomic facts in regard to the various axes, abdominal, pelvic, rectal, and anal, are not properly understood. If they were it would be plain to all why displacements of the uterus occur in certain forms of lacerations and not in others. The function of the perineum is not to keep the uterus in position, but to sustain the relation of the rectum and anus. When the perineum is destroyed, the continual forcing downward of the contents of the bowel, the normal resistance being removed, results in the formation of the rectocele. To restore the normal condition it becomes necessary to reunite the ends of the severed muscles and to dissipate the sulci on either side over the rectocele, thus strengthening the wall and thereby preventing the pouching. The straining at stool is the cause of the retroversion and prolapse. The uterus first becomes wedged in back of the utero-sacral ligaments, and not being able to free itself, further straining causes further extrusion of the organ. For the relief of this condition Dr. Wylie performs a modification of Tait's flap-splitting operation. This consists in a narrowing of the posterior vaginal

wall, and a picking up of certain tissues. The levator ani and the fascia in the depressed sulci on either side must be denuded and drawn up. The denudation must be deep enough to expose the dense white tissue. The structures must then be firmly drawn up with silver-wire sutures, the last three or four being entirely within the vagina. The sutures are left *in situ* for two or three weeks.

DR. CHARLES P. NOBLE, of Philadelphia, has found that when tears extend into the rectum they are invariably in the median line, and this probably is the reason why the uterus does not prolapse. He is always able in operating to find the fibers of the torn levator ani muscle, and he did not think that the support of the pelvic tissues depends upon a little white fibrous tissue, but upon the integrity of the levator ani muscle.

DR. A. J. C. SKENE, of New York, agreed with Dr. Wylie in his statement that complete lacerations do not cause prolapse. Another reason why there is no prolapse with lacerations in the median line is that compensation takes place in the levator ani muscle, the pelvic floor being drawn up, and prolapse consequently being prevented. He does not recognize the condition of so-called rectocele; what he finds in these cases is a mass of hemorrhoidal veins, and the best operation to correct this condition is Emmet's.

In closing, DR. WYLIE said that he could not see how it would be possible for any operation done in the median line to accomplish any good when the laceration has occurred in the sulci.

DR. FRANCIS DAVENPORT, of Boston, read a paper entitled "The Ultimate Results of the Treatment of Retrodisplacements by Pessaries." He admitted that there are certain objections to the use of the pessary, but thought that these have been exaggerated. Most women can wear pessaries without discomfort; all that is required is a certain amount of skill in the fitting of the instrument. One objection is that the pessary requires frequent attention from the physician; another is that it is a foreign body, and necessarily unpleasant; still another is that it does not cure, and must be worn for the rest of the patient's life. He gave the history of fifty selected cases of retroversion that had been treated with pessaries. Ten were completely cured, the uterus being held in normal position. Nine were benefited and symptomatically cured. Thirty-one were now going without pessaries, the uteri being in normal position, although they still had some symptoms. He stated that this treatment gave 20 per cent. of absolute cures. The shorter time the displacement has lasted, the sooner the cure. In cases in which operation is objected to, he thought a fair trial of the pessary should be made for several months, or a year.

DR. CUSHING, of Boston, thought that the usual statistics given on this subject are valueless, that too often the symptoms are treated, and not the cause. He was sure that but few cases required Alexander's operation. He believed in giving a fair trial to every form of treatment, including the pessary, and if then the uterus would not remain in position, and the symptoms continued, the abdomen should be opened and the trouble corrected.

DR. CLEMENT CLEVELAND, of New York, said that he believed in the use of the pessary and in Alexander's operation. He thought that there was a field for both,

and that Alexander's operation was the most beneficent operation, and had come to stay. He had done the operation over forty times, with the most gratifying results.

DR. EDEBOHLS, of New York, contended that the only cases in which the pessary could be used are those in which there are no adhesions, and in which the tubes and ovaries are in a normal condition. In the other class of cases, which is by far the largest, his plan is to shorten the round ligaments. He has done this seventy-five or eighty times and always with success. There was always an anatomic cure, but not always a symptomatic one.

DR. WILLIAM H. WATHEN, of Louisville, presented a communication entitled "Retro-peritoneal and Intra-ligamentous Tumors of the Uterus and Adnexa." Although cysts of the paroöphoron and retro-peritoneal uterine myomata have not a common etiology, he considered both varieties of tumors together for the reason that the technique of the operation for their successful removal is practically the same. With but few exceptions, cysts that open up the layers of the broad ligament, and burrow deeply into the pelvic and retro-peritoneal connective tissue probably arise from remnants of the mesonephron in the paroöphoron. Either the cystic or the solid tumor may separate the peritoneum anteriorly and lie in front of it, attached to the bladder or to the fascia and muscles of the abdominal wall. In some cases the separation of the peritoneum may be so extensive that the tumor may be removed and enucleated through a median incision between the tubes and umbilicus, without wounding the peritoneum. The separation, however, is usually from the posterior pelvic and abdominal walls. The tumor, having passed beneath Douglas' sac, separates the mesorectum, mesocolon, or mesentery of the small intestine, and lies under the appendix, cecum, or ascending colon, and between these and the wall. The capsule is full of enlarged vessels, which bleed freely during the process of enucleation. These vessels may even be as large as sinuses, especially when the tumor has unfolded the mesentery of the bowel. The intra-ligamentous or retro-peritoneal tumors should not be removed without an intimate knowledge of the normal relations of the pelvic and abdominal viscera to the surrounding tissues and to each other. These tumors are mainly supplied with blood from the ovarian and uterine arteries, and successful enucleation depends largely upon an accurate ligation of these vessels. The dangers attendant upon the operation are hemorrhage from divided adhesions, from the capsule of the tumor, from the denuded surface of a myoma, from injury to the spermatic and uterine arteries, the iliac arteries and veins and the inferior vena cava, and wounding of the ureters, bladder, or intestines. The causes of death are hemorrhage, shock, and sepsis. To prevent injury to a ureter that may be in front of the tumor, it is best to incise the capsule and introduce ligatures parallel to the abdominal wound. Hemorrhage will be greatly lessened by careful enucleation close to the cyst-wall or the substance of the myoma, thus pushing the vessels in the capsule and connective tissue away from the tumor, without wounding them. In some cases by enucleating close to the tumor and the uterus it may be possible to perform total hysterectomy without ligating the uterine

arteries, which are pushed aside and left in the pelvis uninjured. Great care must be observed in separating the tumor from the bladder and the intestines, to avoid wounding or so injuring their coats as to give rise to sloughing. When the pre-vertebral space is reached the dissection must be done carefully, hugging the tumor, to avoid the ureters and deeply seated vessels. Hemorrhage from the substance of a soft cavernous myoma may be controlled by firm pressure with gauze or ligation *en masse*, the ligature being introduced deeply under the bleeding vessels by means of a long curved needle. Adhesions should be separated if possible between forceps or ligatures. The cyst should be tapped before enucleation is begun, for when this is done the caliber of the vessels in the capsule is reduced. If hysterectomy is necessary, total extirpation is preferable. If possible, it is best to ligate the uterine arteries to the outside of the ureter, before they give off branches to supply the upper portion of the vagina and cervix. There is no fixed opinion as to the treatment of the sac-cavity. It may be drained through the vagina, through the abdominal walls, with or without suturing the capsule to the abdominal wall, or it may not be drained at all—as when hemostasis has been nearly perfect and the operation aseptic. In total extirpation the vaginal vault should be closed by interrupted sutures.

#### THIRD DAY—MAY 31ST.

DR. MATTHEW D. MANN, of Buffalo, read a paper on "Inflammation of the Ureters from a Medical Stand-point." He contended that inflammation of the ureters is much more common than is generally supposed, basing his belief upon careful observations extending over a period of many years. Some of the causes of such inflammations are pelvic cellulitis, suppuration in and around the pelvic organs, gonorrhea, and labor. The symptoms are pain and tenderness on pressure over the course of the ureters. Whenever these are present the urine should be examined. If its reaction is acid and pus is present, ureteritis should be suspected. Injury to the ureters occurs most usually when the head pushes down the anterior lip and drags down the bladder behind the pubes; it also takes place in instrumental deliveries. Ureteritis is frequently mistaken for inflammation of the bladder. It may arise from any condition causing obstruction to the flow of the urine. Gonorrheal cystitis may extend to the ureters. Dr. Mann expressed the belief that the pain and discomfort which persist in many cases after the removal of pus-tubes are due to unrecognized inflammation of the ureters. The vesical irritation associated with antelexion is not so much due to the displacement as to the dragging on the ureters. An examination of the urine would prove this. The first symptom noticed in ureteritis is a slight catarrhal condition of the urine. If the ureters should now be palpated they will be found to be thickened and sacculated. The bladder is not generally affected, but there may also be cystitis. The pain is most commonly located on the left side, and is burning and cutting in character, and much aggravated at the menstrual period. The pain may be so severe as to make walking impossible. Increased frequency of micturition is the most common symptom. A curious symptom is a distaste for water. Bilious attacks and periods of great depression of spirits occur. The diagnosis is to be made by

an examination of the urine and by palpation of the ureters. The urine is scanty and contains pus-cells and blood-cells; it is markedly acid in reaction; it contains a slightly increased amount of mucus. The treatment is constitutional, local, and surgical. The constitutional treatment includes hot baths, dry hot air, and the free use of water and alkalies; then medicines to increase the secretion of urine, and antiseptics to be excreted with the urine. Finally, the formation of a vesico-vaginal fistula at times gives marked relief.

DR. J. M. BALDY, of Philadelphia, expressed the opinion that inflammation of the ureters is very rare. When it exists, the only thing to do is to give alkalies. He thought that sweating the patient would concentrate the urine and thus aggravate the condition.

DR. A. P. DUDLEY maintained that there is one class of cases in which a mistake in diagnosis might be made, and that was between appendicitis and ureteritis. He believed that the disease begins in the ureter itself. He said that pressure upon the ureter from the various forms of disease of the appendages might cause obstruction of its caliber and result in disease in the kidneys.

DR. FORD thought that ureteritis occurs frequently in young women in whom there is no particular disease of the appendages. He agreed with Dr. Mann that the causes are mainly dietetic, lithemic conditions being brought about which caused irritation of the ureters. He had had good results from high enemata of water, introducing from three pints to two quarts. These acted as diuretics. Everything should be done to secure perfect oxidation.

DR. CUSHING, of Boston, thought that the condition probably existed in cases of obscure pelvic pains with frequent micturition and irritable bladder.

DR. CHARLES P. NOBLE, of Philadelphia, read a paper entitled "Symphysiotomy *versus* the Induction of Premature Labor." He gave an historic review of the subject with statistics showing the slight inherent risks to the mother when symphysiotomy is performed. In cases of contracted pelvis he prefers to allow the patient to go to full term, then to perform symphysiotomy and deliver the child by a high forceps-operation.

A paper by DR. THOMAS A. ASHBY, of Baltimore, on "The Influence of Minor Forms of Tubal and Ovarian Disease in the Causation of Sterility," was read by title.

#### NEWS ITEMS.

*N. S. Davis Professorship in the Northwestern University.*—Mr. William Deering, a prominent business man of Chicago, has donated \$50,000 to the medical department of the Northwestern University of Chicago, for the establishment of a professorship to be named after Dr. N. S. Davis, otherwise known as the Father of the American Medical Association.

*The Columbus Medical Journal*, since the 1st of July, has been enlarged, and appears every two weeks instead of monthly, as heretofore. A commendable departure will be the elimination of interleaved advertisements. Dr. R. Harvey Reed is the new Editor.

*Dr. Carl Posner*, one of the editors of the *Berliner klinische Wochenschrift*, has been appointed Professor of Internal Medicine in the University of Berlin.